



# LOCAL AREA PLACE MAKING STUDY

SCOTCHMER LOCAL AREA PLACE MAKING STUDY

SCOTCHMER PRECINCT, NORTH FITZROY

17 JANUARY 2019

# SCOTCHMER PRECINCT, NORTH FITZROY

CLIENT: Yarra City Council

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## 1 INTRODUCTION

O'Brien Traffic has been engaged by Yarra City Council to undertake a Local Area Place Making Study in the Scotchmer Precinct, North Fitzroy.

The Study has been undertaken in accordance with Council's Local Area Place Making Policy 2017.

Local Area Place Making (LAPM) is primarily focussed on the planning and management of Council roads. It aims to improve places for people by managing vehicle traffic and improving conditions for pedestrians and cyclists.

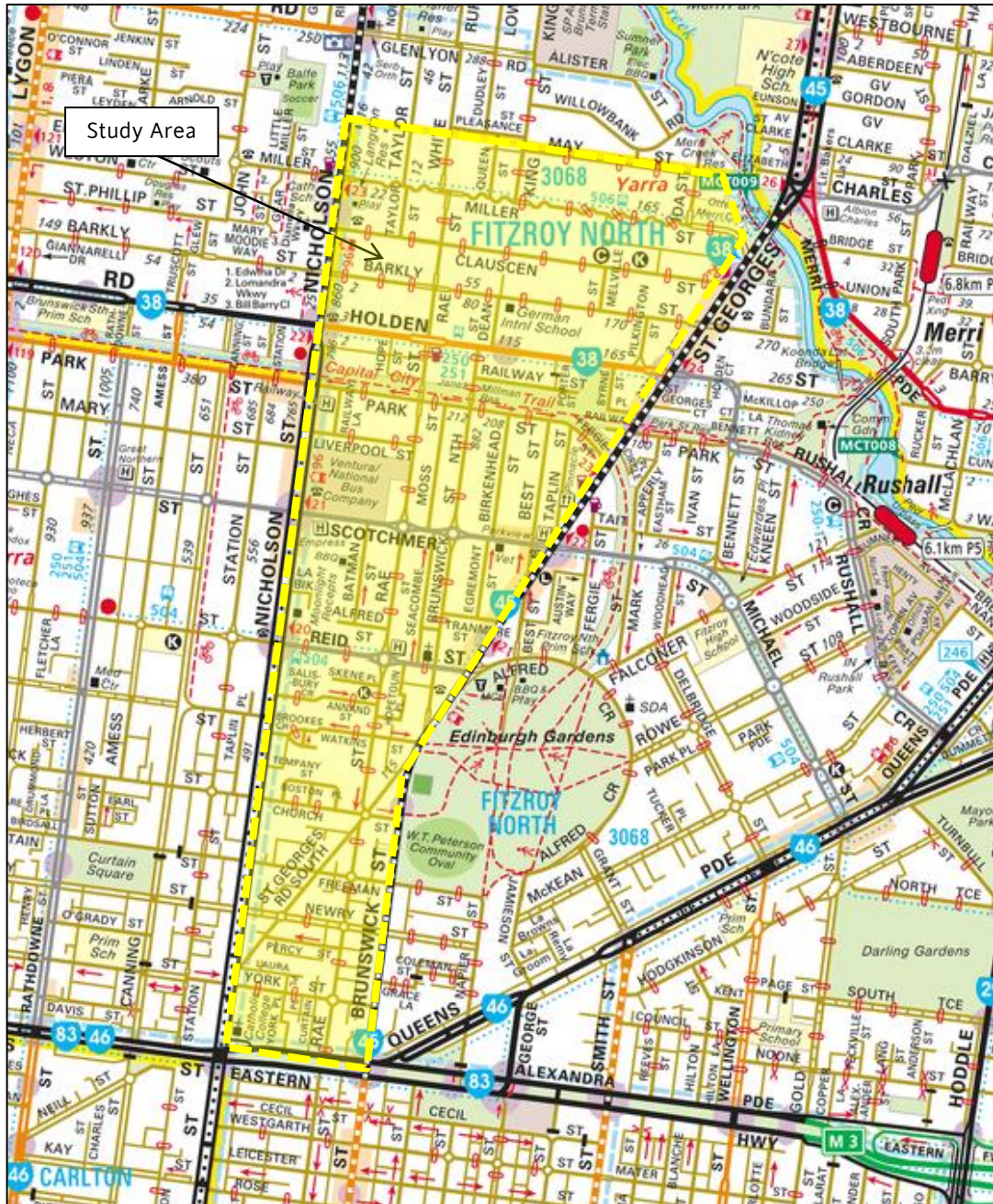
Engagement with the community is a key component of the LAPM process. The input of the community in identifying the issues and needs in their neighbourhood, together with analysis of traffic data and crash data, forms the basis for the development of the LAPM scheme.

## 2 STUDY AREA

The study area is bounded by Nicholson Street, May Street, St Georges Road, Brunswick Street and Alexandra Parade in North Fitzroy, as shown in **Figure 1**.

The study area is predominantly residential, with the exception of:

- retail/commercial uses fronting Nicholson Street and St Georges Road;
- retail/commercial uses at the eastern end of Scotchmer Street, including Piedimonte's Supermarket;
- Merri Creek Primary School, located on the northern side of Miller Street;
- Simmonds Catholic College, on the north-eastern corner of Nicholson Street and Alexandra Parade; and
- the Capital City Trail and adjacent Janet Millman Reserve.



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FIGURE 1: LOCATION OF STUDY AREA

### 3 EXISTING CONDITIONS

#### 3.1 STREET NETWORK

##### 3.1.1 Arterial roads

Nicholson Street, Brunswick Street, St Georges Road and Alexandra Parade are located on the boundary of the study area. These roads are Primary Arterial Roads under the management of VicRoads.

Council typically do not undertake works on VicRoads' roads, however can advocate to

VicRoads for works to be undertaken.

The arterial roads are described below.

**Nicolson Street**, south of Holden Street, provides two traffic lanes and marked kerbside parking bays in each direction, separated by central tram tracks located within a segregated carriageway. North of Holden Street, the carriageway narrows to provide two traffic lanes in each direction with central tram tracks. Kerbside parking is typically permitted outside of clearway times.

**St Georges Road**, within the study area, provides two traffic lanes and a bicycle lane in each direction with central tram tracks. Kerbside parking is permitted outside of clearway times (which obstructs the bicycle lanes).

**Brunswick Street** (south of St Georges Road) provides two traffic lanes and a bicycle lane in each direction with central tram tracks. Kerbside parking is permitted outside of clearway times (which obstructs the bicycle lanes).

**Alexandra Parade**, within the study area, provides four traffic lanes plus kerbside parking in each direction separated by a wide central median.

### 3.1.2 Major Council Roads and Collector Roads

The main east-west routes through the study area are Holden Street, Scotchmer Street and Reid Street. These streets are described below.

**Holden Street** is a Major Council Road. It runs in an (approximate) east-west orientation between Nicholson Street and St Georges Road and provides one traffic lane, a bicycle lane and a parking lane in each direction. Traffic signals are provided at its intersections with Nicholson Street and St Georges Road, with pedestrian signals provided approximately mid-way.

**Scotchmer Street** is a Collector Street under the care and management of Council. It runs in an (approximate) east-west orientation between Nicholson Street and St Georges Road and provides one traffic lane in each direction. Kerbside parking is a mix of angle (60 degree) and parallel parking. Roundabouts are provided on Scotchmer Street at the intersections of Rae Street and Brunswick Street North. Traffic signals are provided at its intersections with Nicholson Street and St Georges Road.

**Reid Street** is also a Collector Street under the care and management of Council. It runs in an (approximate) east-west orientation between Nicholson Street and St Georges Road and provides one traffic lane, a bicycle lane and a parking lane in each direction. Three speed humps are provided along Reid Street and a roundabout at its intersection with Rae Street. Traffic signals are provided at the intersection of Reid Street and Nicholson Street.

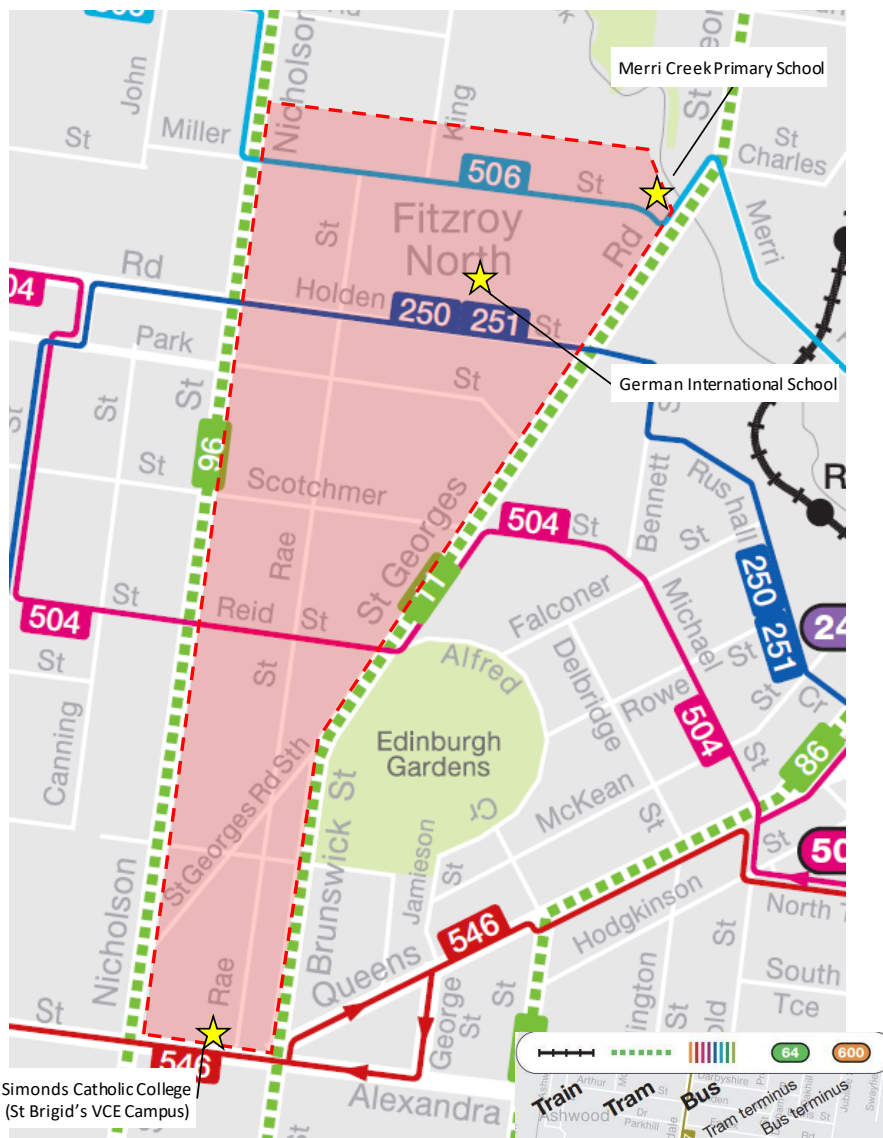
### 3.1.3 Local streets

The majority of streets within the study area are local streets. These are typically orientated approximately east-west or north-south. While most streets provide for two-way traffic movements, many streets are one-way only. Kerbside parking is typically permitted in most streets.

Various traffic management treatments have been implemented in the local streets. These include speed humps, roundabouts, pedestrian crossings, one way-streets etc.

### 3.2 PUBLIC TRANSPORT ROUTES

Public transport routes are shown in **Figure 2**.



SOURCE: WWW.PTV.VIC.GOV.AU

FIGURE 2: PUBLIC TRANSPORT ROUTES

#### 3.2.1 Bus routes

Bus routes operate on Miller Street, Holden Street, Reid Street, St Georges Road (Reid Street to Scotchmer Street), and Alexandra Parade.

#### 3.2.2 Tram routes

Nicholson Street, St Georges Road and Brunswick Street are tram routes.

### 3.3 BICYCLE ROUTES

Bicycle routes are shown in Figure 3.

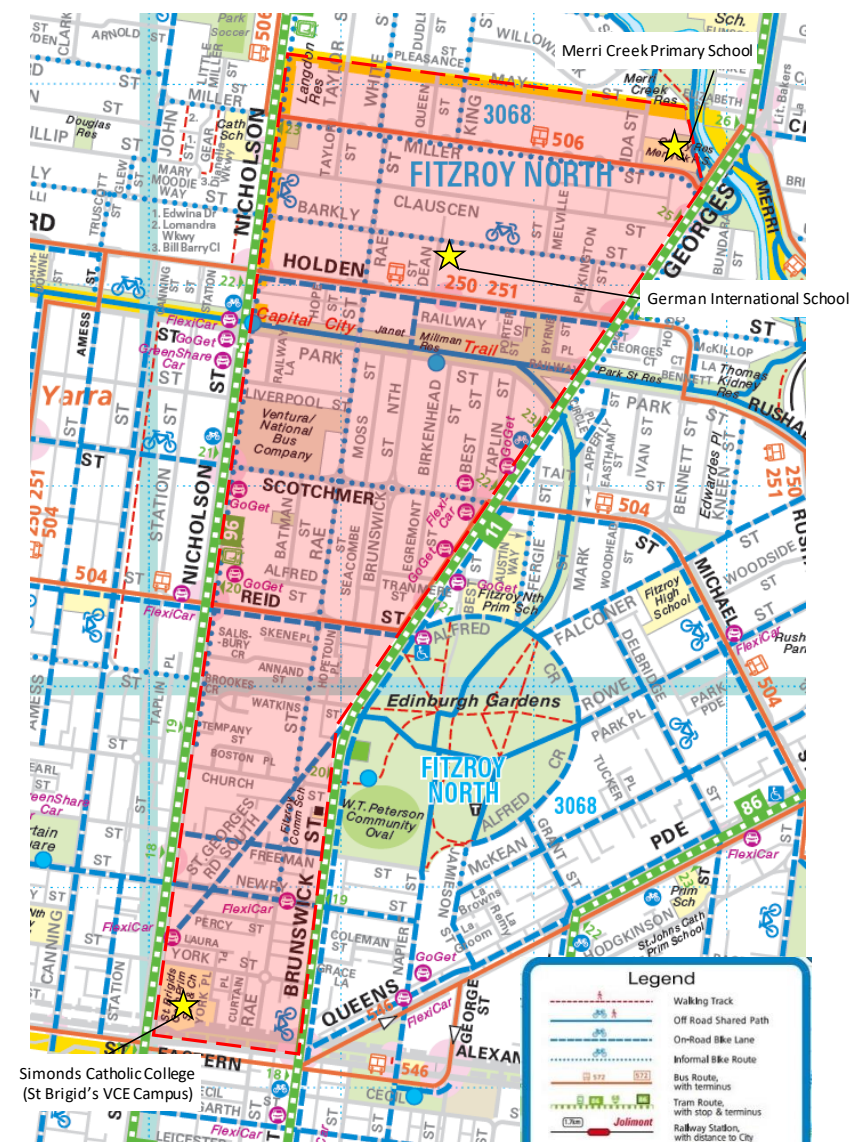


FIGURE 3: BICYCLE ROUTES

#### 3.3.1 Off-road bike paths

The Capital City Trail runs between St Georges Road and Nicholson Street. This is a shared path that is popular with recreational users and commuters.

#### 3.3.2 On-road bicycle routes

On-road bicycle paths are provided on Holden Street, Reid Street, Freeman Street, Newry Street and St Georges Road South.

Miller Street, Barkly Street, Scotchmer Street, Rae Street, White Street, King Street and Nicholson Street (north of Church Street) are informal bicycle routes.



### 3.4 TRAFFIC VOLUME AND SPEED DATA

Traffic volume and speed data was provided by Council and is presented diagrammatically in **Appendix A**. This includes

- Daily traffic volumes;
- AM and PM peak hour volumes; and
- 85<sup>th</sup> percentile speed<sup>1</sup> data.

#### 3.4.1 Traffic Volumes

Most local streets within the study area have traffic volumes less than 1,000 vpd, with the exception of:

- Miller Street, Brunswick Street North and Rae Street with weekday traffic volumes in the order of 2-3,000 vpd;
- Barkly Street, Dean Street, Freeman Street, Newry Street and Birkenhead Street with weekday traffic volumes in the order of 1-2,000 vpd.

Holden Street, Scotchmer Street and Reid Street have higher traffic volumes, consistent with their function as Major Council Road/Collector Roads.

#### 3.4.2 Vehicle Speeds

A 40 km/h speed limit applies to the study area.

The majority of streets have 85<sup>th</sup> percentile speeds less than 40 km/h.

Holden Street (Dean St – Pilkington Street) and Freeman Street (west of St Georges Road) have 85<sup>th</sup> percentile speeds of 51 km/h and 46 km/h respectively.

### 3.5 CASUALTY CRASH HISTORY

VicRoads casualty crash data for the period from 1 July 2012 to 30 June 2017 was provided by Council. The crash data is presented diagrammatically in **Appendix B**.

**Figure 4** shows the location and number of vehicle, bicycle and pedestrian crashes in the area.

1. The speed at which 85% of all vehicles travel under.

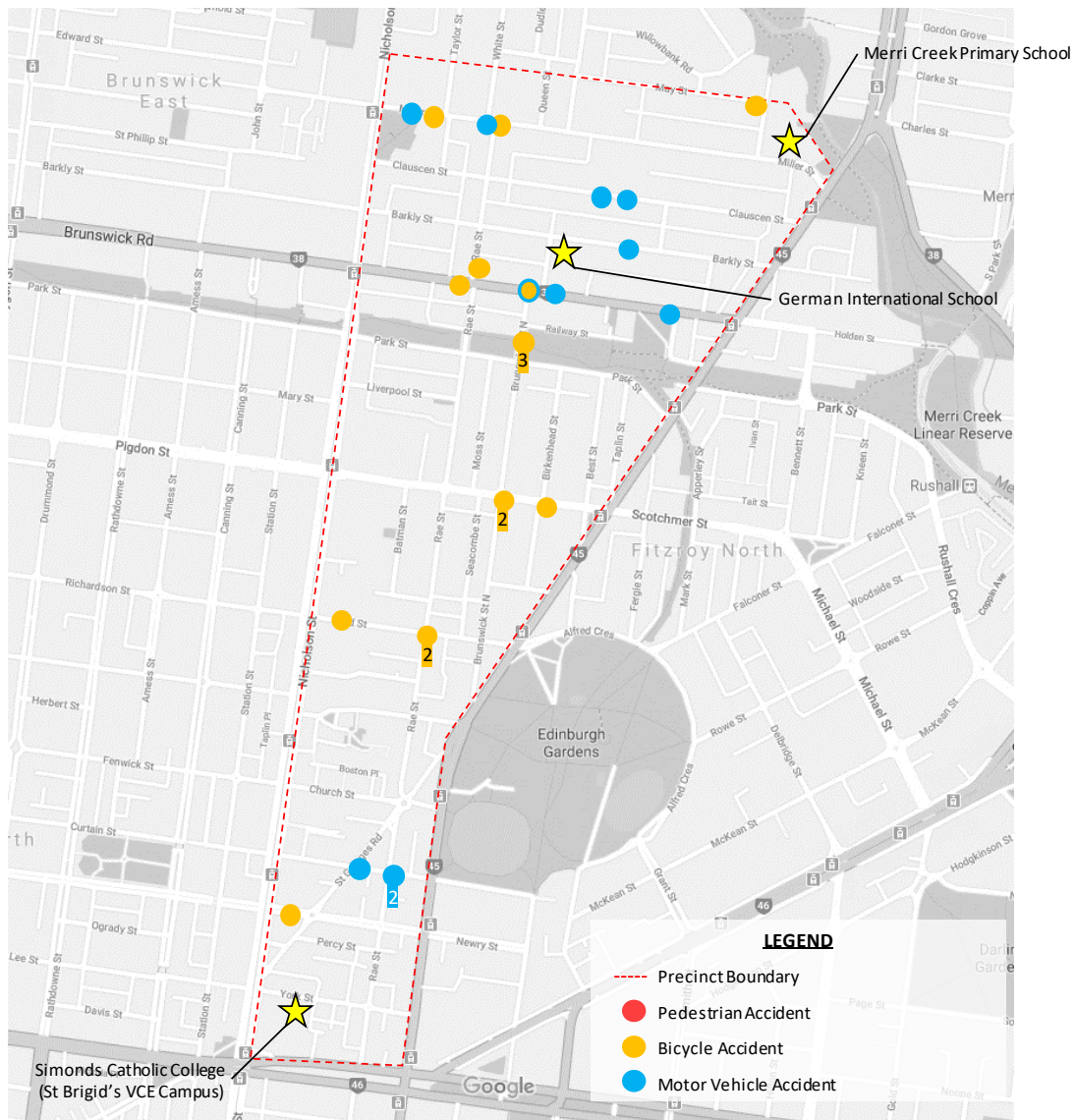


FIGURE 4: CASUALTY CRASHES – JANUARY 2012 TO JUNE 2017

Figure 4 shows that there has been a high proportion of bicycle crashes in the study area.

In particular, 3 bicycle crashes have occurred at the intersection of Brunswick Street North and the Capital City Trail. A further 2 bicycle crashes occurred at each of the Brunswick Street North/Scotchmer Street and Rae Street/Reid Street intersections, both of which are roundabouts.

No pedestrian casualty crashes were recorded in the five year period.

### 3.6 PEDESTRIAN AND CYCLIST COUNTS

Pedestrian and bicycle count data was provided by Council and is presented diagrammatically in **Appendix C**. The data includes pedestrian counts at key intersections and cyclist counts on Rae Street and Brunswick Street North at the Capital City Trail.

## 4 IDENTIFICATION OF ISSUES AND PRIORITIES

### 4.1 TRAFFIC VOLUME AND SPEED DATA

The traffic data for the local streets has been analysed against a set of criteria to identify streets where traffic volume, rat-running, vehicle speeds or heavy vehicles may be an issue of concern. The criteria are listed below:

- Traffic volume - weekday traffic volume greater than 1,000 vpd;
- Through traffic (rat-running) - AM or PM peak hour volumes greater than 14% of the daily volume;
- Vehicle speeds - 85<sup>th</sup> percentile speed greater than 40 km/h; and
- Heavy vehicles – proportion of heavy vehicles in excess of 5% of total traffic.

The traffic analysis is summarised in **Figure 5** and discussed further in Sections 4.1.1 to 4.1.4.

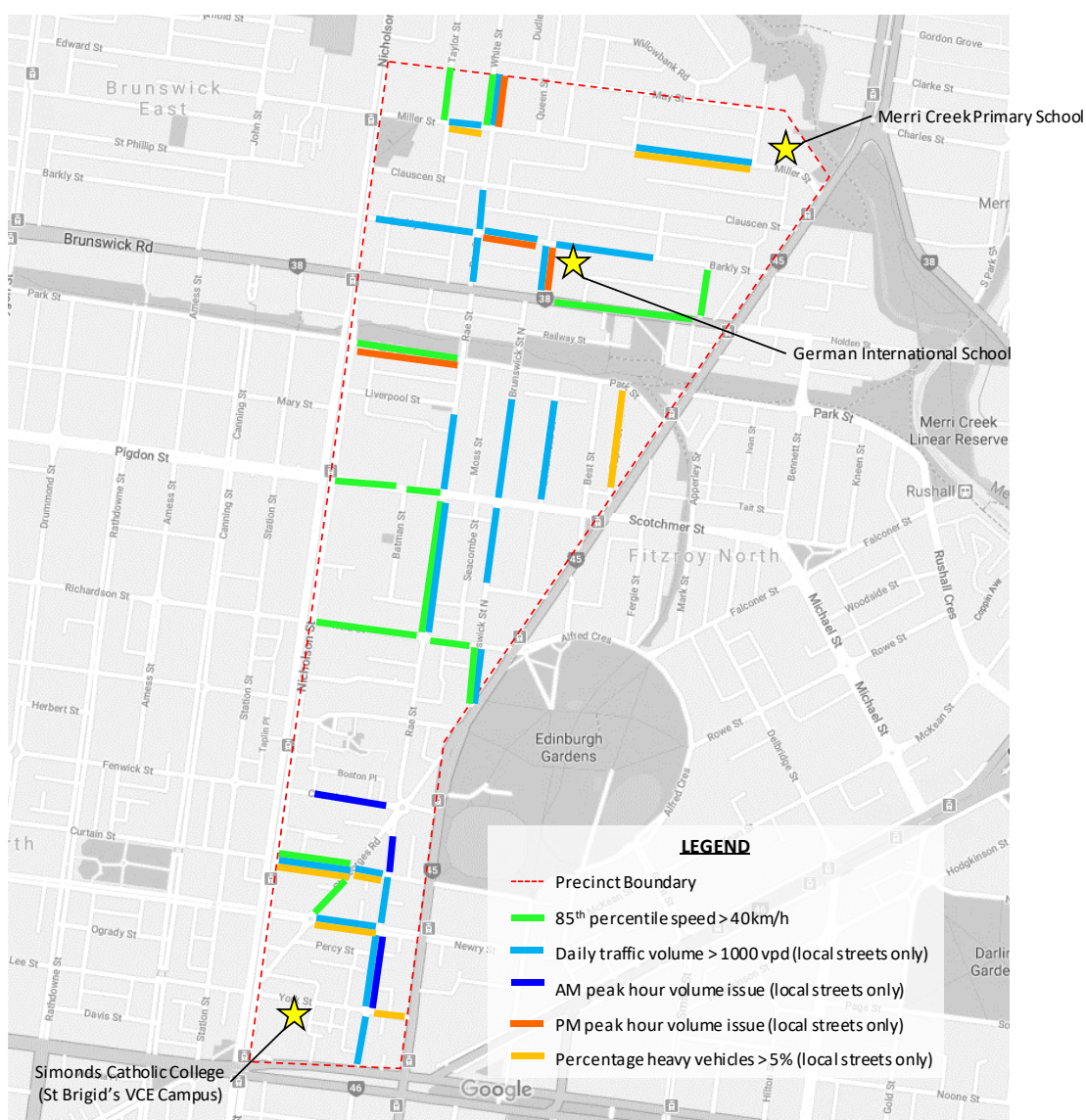


FIGURE 5: POTENTIAL ISSUES OF CONCERN – VEHICLE SPEEDS, TRAFFIC VOLUME, AM/PM PEAK PERIOD RAT-RUNNING, AND HEAVY VEHICLES

#### 4.1.1 Daily Traffic Volumes

Typically, local streets with traffic volumes of 1,000 vehicles per day (vpd) or lower is considered acceptable.

The following local streets have weekday traffic volumes greater than 2,000 vpd:

- Miller Street (2,857 vpd);
- Brunswick Street North (1,818-2,728 vpd);
- Rae Street (638-2,480 vpd); and
- Barkly Street (1,401-2,142 vpd).

The following local streets have weekday traffic volumes between 1,000 and 2,000 vpd:

- Dean Street (1,464 vpd); and
- Freeman Street (1,085 vpd);
- Newry Street (1,053 vpd); and
- Birkenhead Street (1,016 vpd).

Holden Street, Scotchmer Street and Reid Street have higher traffic volumes, consistent with their function as Major Council Road/Collector Roads.

#### 4.1.2 Peak Hour Traffic Volumes

Where the peak hour traffic volume is greater than 14% of the daily traffic volume, through traffic or 'rat-running' is identified as a potential issue.

In the AM peak, this occurs on Church Street and Rae Street (south of St Georges Road).

In the PM peak, this occurs on White Street, Barkly Street, Dean Street and Park Street (west of Rae Street).

#### 4.1.3 Vehicle Speeds

The majority of streets have 85<sup>th</sup> percentile speeds less than 40 km/h (i.e. the speed limit).

The traffic data indicates 85<sup>th</sup> percentile speeds around 40-44km/h in the following streets - Taylor Street, White Street, Park Street (west of Rae Street), Pilkington Street, Scotchmer Street (west of Rae Street), Rae Street (Scotchmer Street - Reid Street), Reid Street, Brunswick Street North (south of Reid Street), and St Georges Road (Freeman Street to Newry Street).

Holden Street (Dean St – Pilkington Street) and Freeman Street (west of St Georges Road) have 85<sup>th</sup> percentile speeds of 51 km/h and 46 km/h respectively.

#### 4.1.4 Heavy Vehicles

Local streets should typically have a low proportion of heavy vehicles – unless they serve industrial areas or are bus routes. In the study area, traffic volumes comprise more than 5% heavy vehicles on the following streets:

- Miller Street – bus route;
- Taplin Street – predominantly residential street with commercial uses at southern end; and
- Freeman Street, Newry Street and York Street – residential streets.

## 4.2 CRASH DATA

The crash data indicated a high proportion of bicycle crashes in the study area during the five year period analysed. Multiple bicycle crashes occurred at the following locations:

- Brunswick Street North/Capital City Trail - 3 bicycle crashes;
- Brunswick Street North/Scotchmer Street roundabout - 2 bicycle crashes; and
- Rae Street/Reid Street roundabout – 2 bicycle crashes.

Two motor vehicle crashes occurred at the intersection of Rae Street and Freeman Street, which is a cross intersection controlled by stop signs.

## 4.3 STAGE ONE CONSULTATION – ISSUES AND IDEAS

Council consulted with the community at the commencement of the project to inform the community of the project and invite their input.

The Stage One Consultation comprised:

- Postcards – delivered to residents and businesses;
- Information sessions; and
- On-line survey – inviting participants to identify issues of concern and offer suggestions.

The on-line survey identified a range of issues including traffic volumes, rat-running, vehicle speeds, pedestrian and cyclist safety, pedestrian and cyclist infrastructure, and amenity.

## 4.4 OVERVIEW OF ISSUES

An overview of the issues identified from the traffic data, crash data and community consultation is presented in **Figure 6**.



FIGURE 6: OVERVIEW OF TRAFFIC ISSUES IN THE STUDY AREA

#### 4.5 STAGE TWO CONSULTATION – PRIORITIES

Following analysis of the traffic and crash data, and summation of the community input, Council undertook a second on-line survey to rank priorities. The results of the survey are provided in **Appendix D**.

The highest priority Council roads, and the issues of concern, were identified as follows:

- Scotchmer Street – traffic volumes, pedestrian/cyclist safety at roundabouts, issues at Piedemonte’s, cycling facilities, trucks.

- Rae Street – traffic volumes and rat-running, cycling facilities, Capital City Trail crossing, pedestrian/cyclist safety at roundabouts, pedestrian/cyclist safety at Holden Street, crashes at Miller Street and Freeman Street, trucks, driving on the wrong side of the road.
- Brunswick Street North – traffic volumes, rat-running, bicycle crashes, Capital City Trail crossing, pedestrian/cyclist safety at roundabouts, trucks.

Issues identified on the VicRoads managed roads, Brunswick Street, St Georges Road and Nicholson Street, also ranked highly. While issues on these roads are noted, treatments are not included in the LAPM scheme other than in the form of advocacy to VicRoads.

## 5 DEVELOPMENT OF POTENTIAL TREATMENTS

### 5.1 LOCAL AREA STUDY GROUP MEETING ONE

The first meeting of the Local Area Study Group was held on Thursday 22<sup>nd</sup> February 2018 at the Edinburgh Gardens Community Hall.

The aim of the meeting was primarily to develop a draft LAPM Scheme.

A summary of the results of the on-line survey was presented to the Study Group and was generally endorsed by the Group. The Study Group then discussed potential treatment options for the study area.

Minutes of the LASG Meeting are provided in **Appendix E**.

### 5.2 POTENTIAL TREATMENTS – LOCAL STREETS

Based on the discussions at the LASG Meeting, potential treatments were developed to address the identified issues. These are discussed below.

#### 5.2.1 Rae Street / White Street / Miller Street

Rat-running along White Street and Rae Street was identified as an issue of concern. To prevent through movements across Miller Street, a central median could be installed on Miller Street to prevent right turns out of Rae Street and White Street and prevent the through traffic movement. Provision should be made to maintain right turning movements for bicycles.

#### 5.2.2 Rae Street / Holden Street

A median treatment is provided on Holden Street at Rae Street to prevent through movements on Rae Street, i.e. Rae Street is restricted to left in-left out (cyclists excepted). The existing treatment could be improved by widening the median and provided holding rails for cyclists crossing Holden Street.

#### 5.2.3 Miller Street

Traffic volume and speed on Miller Street was identified as an issue and concerns were expressed regarding the existing slow point (one lane) treatments. The existing slow point treatments could be upgraded with full width speed humps. However the design

would need to be bus and bicycle friendly. Opportunities to expand the garden beds could also be considered.

To reduce through traffic using Miller Street, a right turn ban could be implemented on Nicholson Street at Miller Street during the afternoon peak period. Desirably, similar bans would be implemented at Clausen Street and Barkly Street to prevent traffic re-routing to those streets.

Frustration was also expressed with vehicles turning right out of Miller Street to St Georges Road causing delay to other traffic exiting Miller Street, particularly during the afternoon peak period. This could be addressed by implementation of a right turn ban at this location during the afternoon peak period.

#### **5.2.4 Capital City Trail at Rae Street and Brunswick Street North**

There were numerous suggestions for priority to be given to the Capital City Trail at Rae Street and Brunswick Street North. Desirably the crossings would be on a raised platform for traffic approaching from Rae Street and Brunswick Street North.

Alternatively, Rae Street and/or Brunswick Street North could be closed to vehicular traffic from north of the Capital City Trail to Park Street and converted to parkland. This would address traffic volume and through traffic concerns on the streets and improve safety for Capital City Trail users. However, the resultant redistribution of traffic would impact the surrounding street network.

#### **5.2.5 Roundabout treatments**

Pedestrian and cyclist safety was identified as an issue at several roundabouts in the study area. Zebra crossings and bicycle sharrows could be provided at roundabouts to improve pedestrian crossing opportunities and cyclist safety. Zebra crossings and sharrows are proposed at the following locations:

- Scotchmer Street/Rae Street
- Scotchmer Street/Brunswick Street North
- Rae Street/Reid Street
- Rae Street/Church Street/St Georges Road
- St Georges Road/Newry Street
- Rae Street/Newry Street
- Rae Street/York Street

#### **5.2.6 Freeman Street / Rae Street**

Two casualty crashes have occurred at this intersection during the 5-year crash analysis period. Potential improvements would include provision of physical kerb outstands and new traffic islands.

#### **5.2.7 Freeman Street / St Georges Road**

Similarly, this intersection could be improved by provision of kerb outstands and traffic islands on the Freeman Street approaches.



### 5.2.8 Laneway between York Street and Alexandra Parade

Through traffic currently uses the laneway west of Rae Street to rat-run between York Street and Alexandra Parade. Two options to address vehicles rat-running through the lane are as follows:

- Close the laneway (residents excepted); or
- Make the laneway northbound only from Alexandra Parade, i.e. no entry to the laneway from York Street.

### 5.2.9 Rae Street at Alexandra Parade

A partial road closure of Rae Street at Alexandra Parade to prevent vehicles exiting to Alexandra Parade, would eliminate southbound through traffic in this section of Rae Street.

The design would need to take into consideration access to the service station on the eastern corner of Rae Street/Alexandra Parade, in particular the possibility of cars cutting through the service station to bypass the road closure. Consultation should occur with the service station owner.

## 5.3 POTENTIAL TREATMENTS – ADVOCACY TO VICROADS

The following treatment on the arterial road network could be considered for advocacy to VicRoads.

### 5.3.1 St Georges Road / Reid Street / Alfred Crescent

Options to improve safety for all road users at the St Georges Road/Reid Street/Alfred Street intersection should be considered. These could include provision of traffic signals, relocation of the nearby pedestrian crossing and a tram stop upgrade.

## 5.4 CONSULTATION: STAGE THREE – DRAFT LAPM SCHEME

A draft LAPM Scheme comprising the treatments discussed above was put to the community to gauge the level of support for each proposed treatment.

The Stage Three Consultation comprised:

- Brochures - delivered to all residents and businesses in the area;
- Information session; and
- On-line survey.

The on-line survey was in the form of an interactive map and invited the community to “like” or “dislike” each treatment and provide a comment if desired.

A copy of the draft LAPM Scheme and the community response is provided in **Appendix F**.

The response rate from the community was approximately 12%. Overall there was strong support for the majority of treatments.

The following treatments were not supported:

- Right turn bans from Nicholson Street into Miller Street, Clausen Street and Barkly Street during the afternoon peak period; and
- Closure of Brunswick Street North at the Capital City Trail

The following treatments had marginal support only:

- Median on Miller Street to stop right turns in and out of Rae Street and White Street (cyclists excepted) - 85 likes, 73 dislikes; and
- Closure of Rae Street at the Capital City Trail – 69 likes, 67 dislikes.

At the Capital City Trail intersections with Brunswick Street North and Rae Street, the clear preference was to give priority to Trail users at a raised crossing rather than implement road closures.

The preferred option for the laneway west of Rae Street was to implement No Entry from York Street and make the lane one-way northbound from Alexandra Parade.

## 5.5 LOCAL AREA STUDY GROUP MEETING TWO

The second meeting of the LASG was held on Thursday 20th September 2018 at the Bargoonga Nganjin North Fitzroy Library.

The aim of the meeting was to consider the results of the community consultation and reach agreement on proposed treatments to form the draft LAPM Scheme.

The LASG was provided with the results of the of the community consultation. Discussion focused around treatments where the community response was not definitive, in particular:

- *Median on Miller Street to stop right turns in and out of Rae Street and White Street (cyclists excepted)* – there was concern the proposed median treatment would divert traffic to other streets (eg. Taylor Street) and that no countermeasures for other streets were being proposed. It was agreed that the treatment be implemented on a trial basis and the traffic impact on surrounding streets monitored and addressed as necessary.
- *Closure of Rae Street and Brunswick Street North at the Capital City Trail or priority for Capital City Trail users at the intersections* – the LASG was advised that a full road closure of Brunswick Street North was not practical at this time. Southbound turn bans from St Georges Road into Scotchmer Street prohibit an alternative access into the local area between 7:30am and 9:30am weekdays. Evidence was also provided indicating Council approval for a delivery vehicle route via Brunswick Street North to Piedimonte's supermarket. There was a strong view that the alternative option for Brunswick Street North (i.e. priority for the Capital City Trail) was not sufficient to address the traffic and safety issues. There was concern that if a road closure of Rae Street was implemented, traffic would divert to Brunswick Street North. The LASG requested alternative options be considered. Additional consultation was subsequently undertaken and is presented in Section 6.

Minutes of the LASG Meeting are provided in **Appendix G**, as well as a subsequent email received from a member of the LASG in relation to the Minutes.

## 6 FURTHER CONSULTATION: RAE ST AND BRUNSWICK ST NTH

### 6.1 ALTERNATIVE OPTIONS AND TRAFFIC IMPACT ASSESSMENT

Following the second meeting of the LASG, Council determined to further investigate treatment options for Rae Street and Brunswick Street North in the vicinity of the Capital City Trail, and consult further with the community.

A traffic engineering assessment of the impact of various traffic management treatment options on the surrounding road network was undertaken, specifically:

- Right turn ban on Holden Street at Brunswick Street North;
- Median island on Holden Street at Brunswick Street North (i.e. left-in/left-out only);
- Median island on Holden Street at Brunswick Street North and Dean Street (i.e. left-in/left out only);
- Partial closures – southbound closure on Rae Street and northbound closure on Brunswick Street North at the Capital City Trail; and
- Full closure at Rae Street at the Capital City Trail and median island on Holden Street at Brunswick Street North and Dean Street.

In order to undertake the assessment, turning movement traffic counts were collected at the following intersections during the AM and PM peak periods:

- Rae Street/Holden Street;
- Rae Street/Park Street
- Brunswick Street North/Holden Street; and
- Brunswick Street North/Park Street.

The traffic engineering assessment is provided in **Appendix H**.

### 6.2 CONSULTATION

Following the traffic engineering assessment of the various options, further consultation with the community was undertaken.

The options presented to the community and the community responses is provided in **Appendix I**.

Overall there was no majority support for any of the treatment options presented. Based on the responses, it appears that the community is split between those wanting to restrict traffic using Brunswick Street North and those wanting to maintain vehicular accessibility.

Given the results of the consultation, it is recommended to not proceed with any of the above options.

However priority could be given to the Capital City Trail at Rae Street and Brunswick Street North at raised crossing points, as this was strongly supported in the earlier consultation.

## **7 DRAFT LAPM SCHEME**

A draft LAPM Scheme has been developed based on the data and consultations and is presented diagrammatically in **Figure 7**.

Concept plans for the proposed treatments are provided in **Appendix J**.

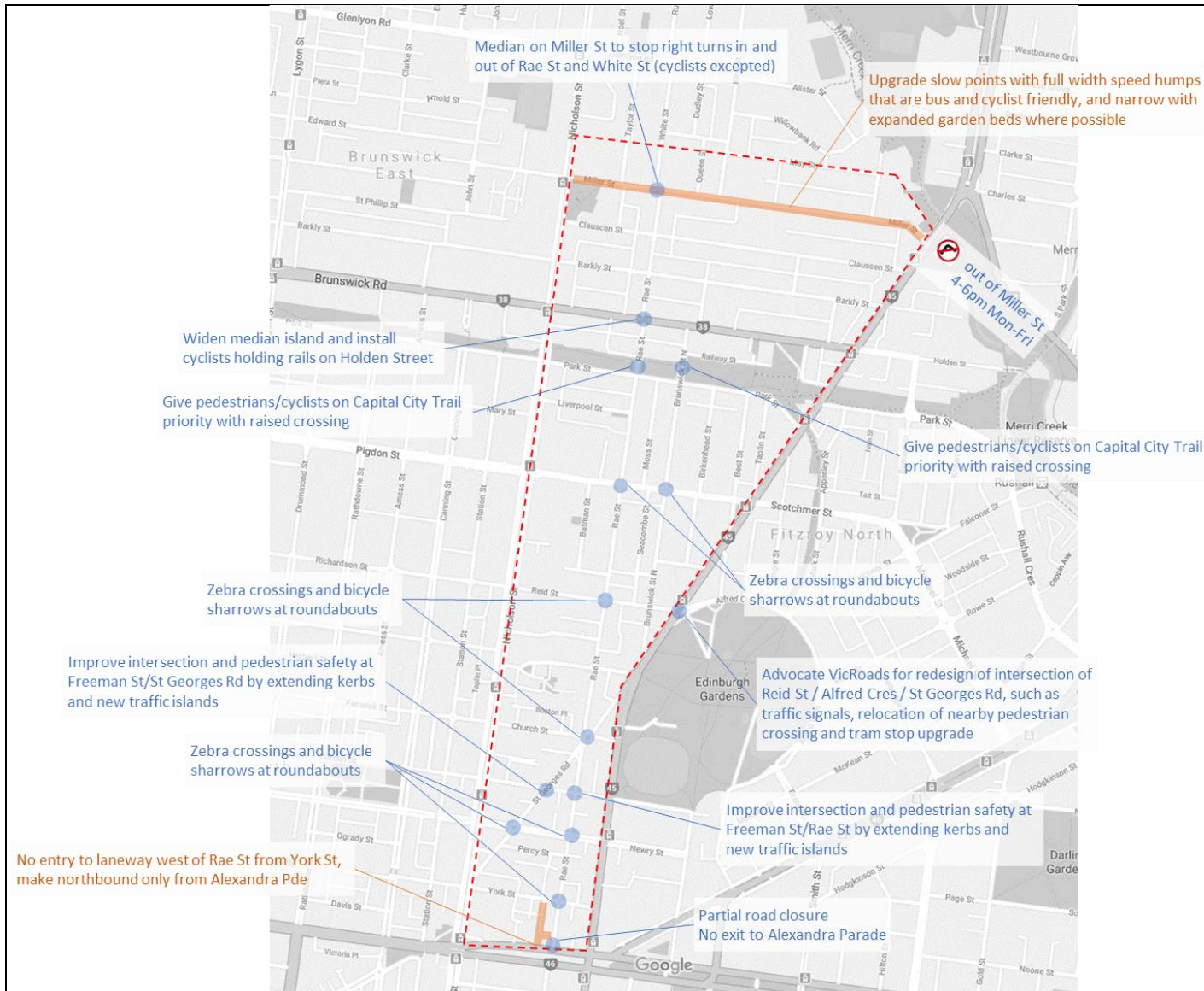


FIGURE 7: DRAFT LAPM SCHEME

## 8 INDICATIVE COST ESTIMATES

Indicative cost estimates are provided in **Table 1**. The indicative cost estimates do not include street lighting or drainage works.

LOCATION	DESCRIPTION	INDICATIVE COST ESTIMATE*
Miller Street at Rae Street/White Street	Median on Miller St to stop right turns in and out of Rae St and White St (cyclists excepted)	\$30,000
Miller Street	Upgrade slow points with full width speed humps that are bus and bike friendly, and expand garden beds where possible (10 locations)	\$200,000
Holden Street at Rae Street	Widen median island and install cyclist holding rails	\$30,000
Rae Street at Capital City Trail	Give priority to Capital City Trail users with a raised crossing at Rae St	\$50,000
Brunswick Street North at Capital City Trail	Give priority to Capital City Trail users with a raised crossing at Brunswick St North	\$60,000
Miller Street at St Georges Road	No right turn from Miller St into St Georges Rd 4pm-6pm Mon-Fri	\$1,000
Scotchmer Street /Brunswick St North	Zebra crossing and bike sharrows at roundabout	\$8,000
Scotchmer Street/Rae Street	Zebra crossing and bike sharrows at roundabout	\$8,000
Reid St / Alfred Cres / St Georges Rd	Advocate VicRoads for redesign of intersection of Reid St / Alfred Cres / St Georges Rd, such as traffic signals, relocation of nearby pedestrian crossing and tram stop upgrade	Council officer time
Reid Street/Rae Street	Zebra crossing and bike sharrows at roundabout	\$20,000
St Georges Rd South/Rae St/Church St	Zebra crossing and bike sharrows at roundabout	\$8,000
St Georges Rd South/Freeman St	Kerb extensions and new traffic island	\$90,000
Freeman Street/Rae Street	Kerb extensions and new traffic island	\$90,000
St Georges Rd South/Newry Street	Zebra crossing and bike sharrows at roundabout	\$8,000

LOCATION	DESCRIPTION	INDICATIVE COST ESTIMATE*
Newry Street/Rae Street	Zebra crossing and bike sharrows at roundabout	\$8,000
York Street/Rae Street	Zebra crossing and bike sharrows at roundabout	\$8,000
Laneway behind 1-37 Rae Street	No entry to laneway behind 1-37 Rae St from York St, make northbound only from Alexandra Pde	\$1,000
Rae Street at Alexandra Parade	Partial road closure on Rae St - No exit to Alexandra Parade	\$40,000

\* Does not include street lighting or drainage works

TABLE 1: INDICATIVE COST ESTIMATES

## 9 VICROADS ADVOCACY PROJECTS

In addition to the proposed treatments shown on the draft LAPM Scheme, a list of priority projects on the arterial road has been formulated throughout the study.

As discussed earlier, Council typically do not undertake works on the VicRoads managed arterial road network, however can advocate to VicRoads for implementation of treatments.

The priority projects on the arterial road for advocacy to VicRoads are listed below.

### *Nicholson Street*

- Reduce speed limit
- Raised threshold treatments at side street intersections for improved pedestrian access.

### *Alexandra Parade*

- More time for pedestrians and trams to cross along Nicholson Street and Brunswick Street.

### *Brunswick Street and St Georges Road*

- Reduce speed limit
- Tram stop upgrades
- Widen crossing point at Capital City Trail to maximise capacity for pedestrians and bike riders crossing at the traffic lights
- Scotchmer Street intersection - filtered right turns in and out of Scotchmer Street, lane arrow markings, bike signal head starts
- Raised threshold treatments at side street intersections for improved pedestrian access.

## 10 CONCLUSION

A draft LAPM Scheme has been developed in consultation with the community and based on analysis of traffic data and crash data. In addition, a priority list of traffic management treatments on the arterial roads have been formulated.

It is recommended that:

- Council adopt the LAPM Scheme; and
- Council advocate to VicRoads for implementation of the proposed treatments on the arterial roads.



# APPENDIX A

## TRAFFIC VOLUME AND SPEED DATA

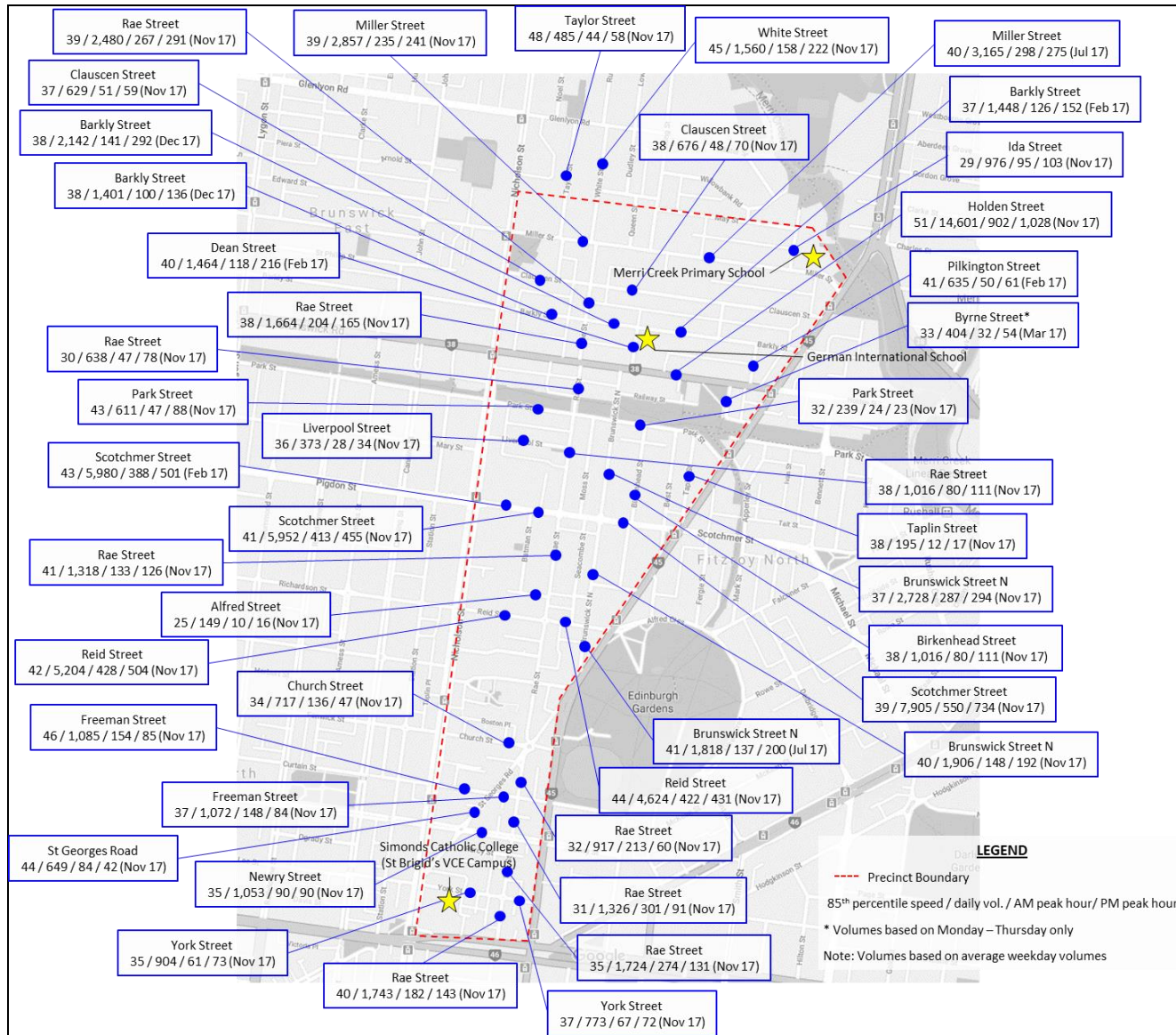


FIGURE A1: TRAFFIC VOLUME AND SPEED DATA

# APPENDIX B

## CRASH DATA

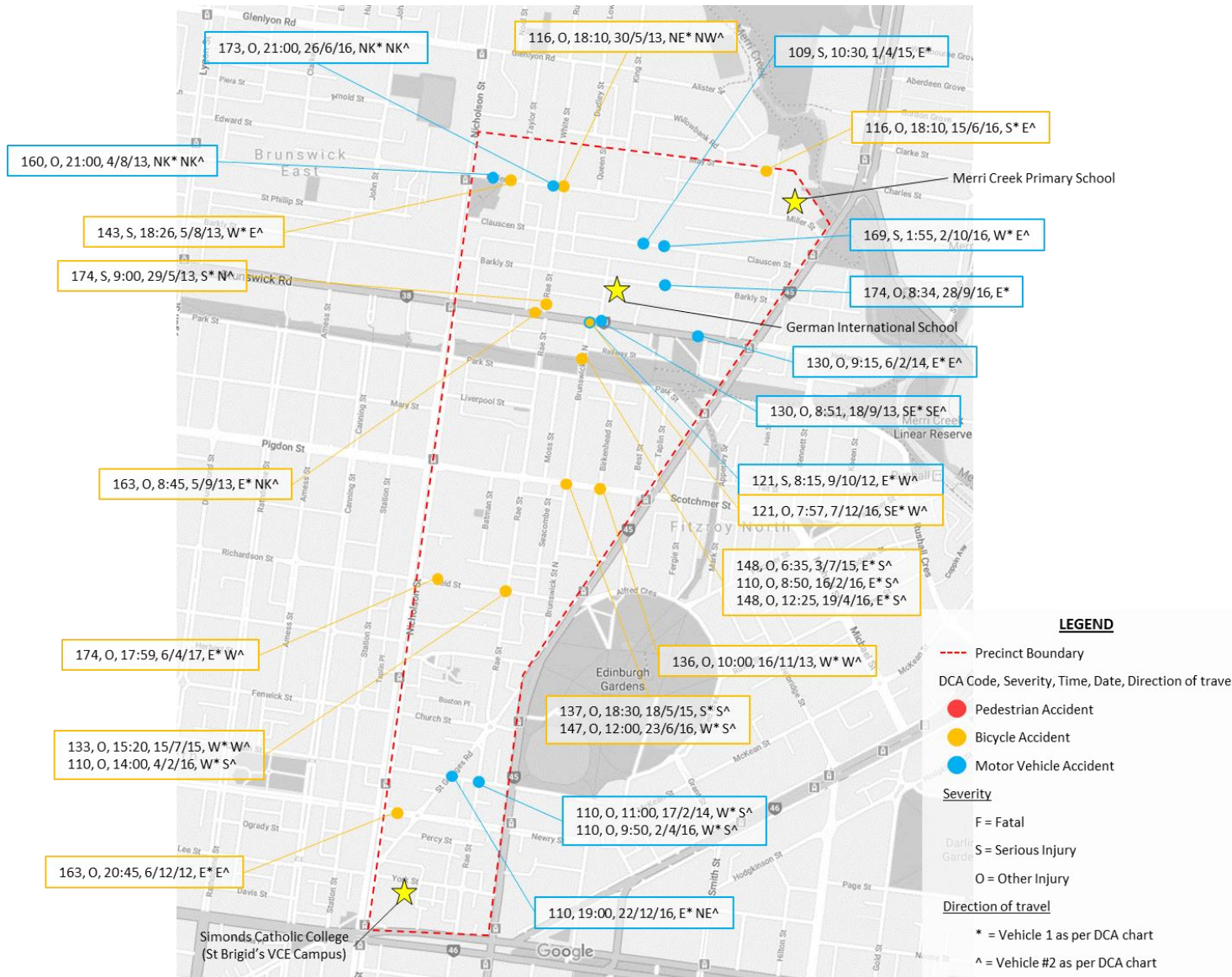


FIGURE B1: CASUALTY CRASH DATA – JULY 2012 TO JUNE 2017

**PEDESTRIAN AND CYCLIST COUNT DATA**

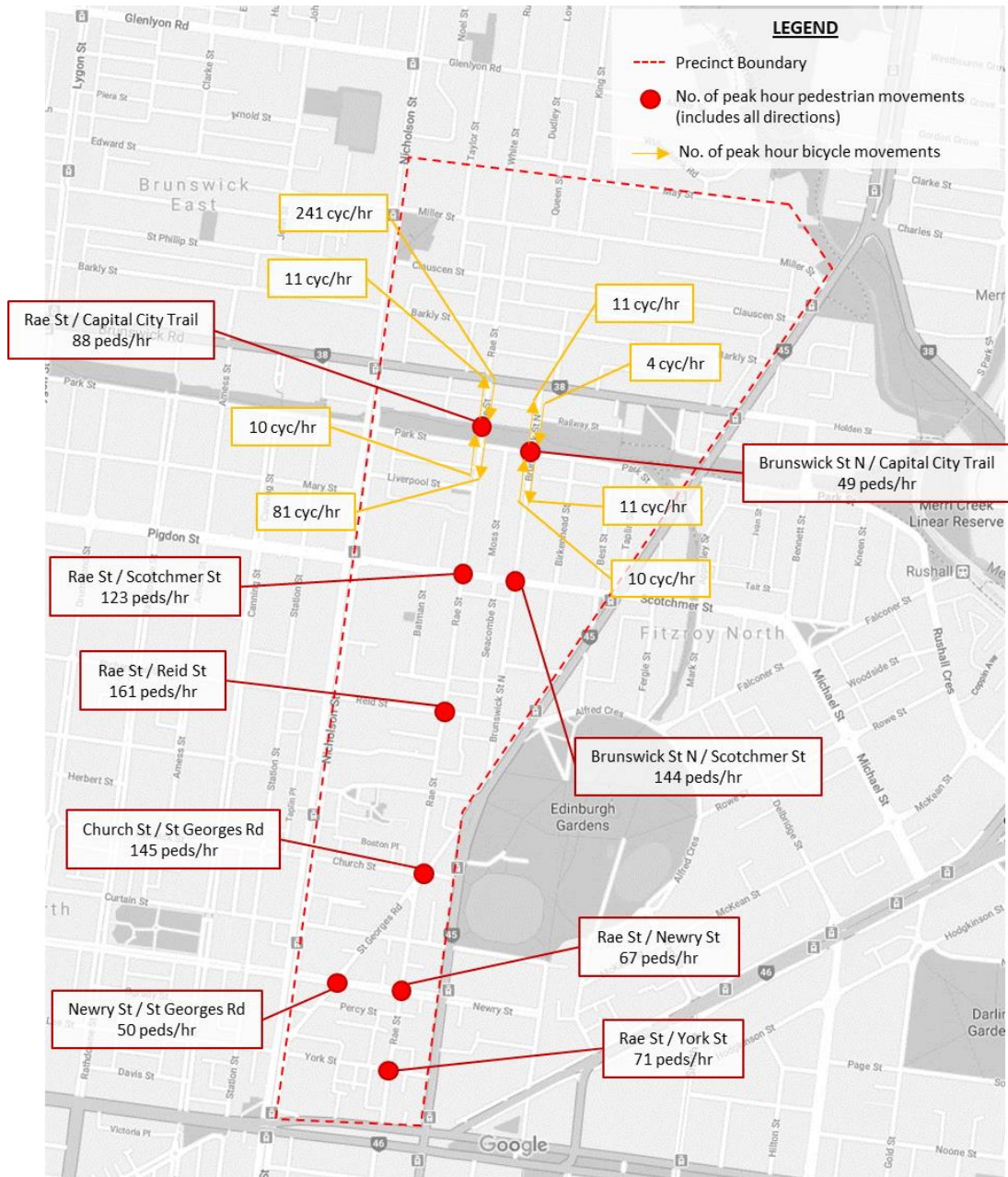


FIGURE C1: PEDESTRIAN AND CYCLIST COUNTS

## COMMUNITY CONSULTATION – RANKING OF PRIORITY ISSUES

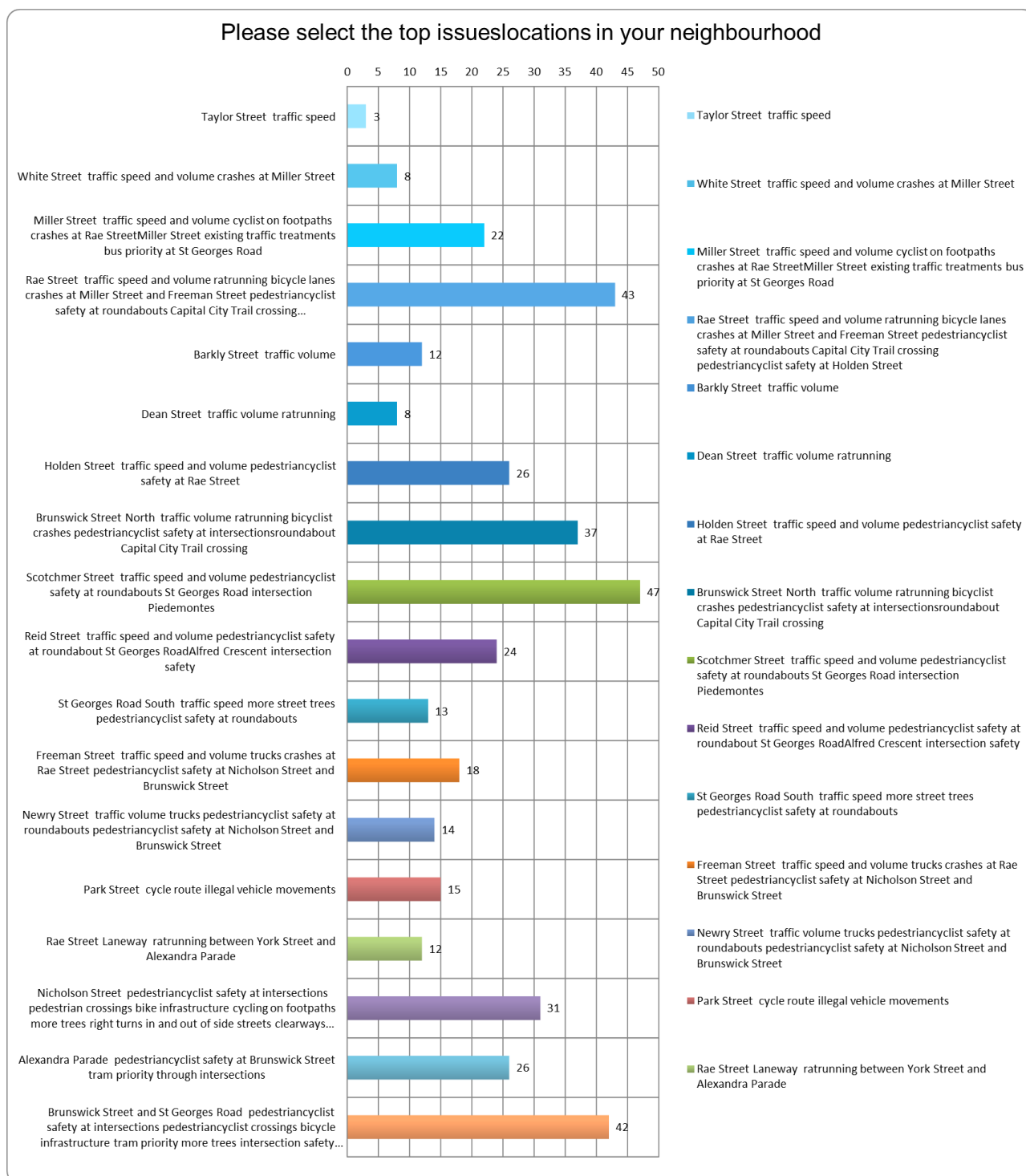


FIGURE C1: RESULTS OF THE ON-LINE SURVEY – RANKING OF PRIORITY ISSUES



**LOCAL AREA STUDY GROUP MEETING 1:  
THURSDAY 22<sup>ND</sup> FEBRUARY 2018  
EDINBURGH GARDENS COMMUNITY HALL, NORTH FITZROY**

**MINUTES**

## LOCAL AREA PLACE MAKING STUDY: SCOTCHMER - NORTH FITZROY

### MINUTES OF LOCAL AREA STUDY GROUP MEETING 1

THURSDAY 22<sup>ND</sup> FEBRUARY 2018

EDINBURGH GARDENS COMMUNITY HALL

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#### 1. ATTENDEES

Cr Jackie Fristacky	City of Yarra
Cr Mike McEvoy	City of Yarra
Richard Young, Manager Traffic and Engineering	City of Yarra
Danny Millican, Coordinator Traffic	City of Yarra
Ted Teo, Transport Engineer	City of Yarra
Matt Harridge, Director	O'Brien Traffic
Jemima Macaulay, Associate	O'Brien Traffic
██████████	Alfred Street
██████████████████	Miller Street
██████████	Rae Street
██████████	Freeman Street
██████████	Holden Street
██████████████████	Rae Street
██████████	Barkly Street
██████████████████	Rae Street
██████████████████	Brunswick Street North
Kerri Gibson, Principal	Merri Creek Primary School
Andrew Tran, Transport Engineer	Moreland City Council

#### *Apologies:*

Cr Misha Coleman

██████████, White Street

#### 2. WELCOME AND INTRODUCTION

The meeting was opened by Richard Young at 6:35pm. Richard then handed over to Matt Harridge to chair the meeting.

Matt invited each person around the table to introduce themselves and briefly state their interest in the study.

### 3. BACKGROUND OF LAPMS AND ROLE OF LOCAL AREA STUDY GROUP

Matt referred to a handout provided to the Study Group outlining the discussion points for the meeting.

Matt provided an overview of the background of LAPM, the study process and the role of the Study Group. The cost and timeframe to deliver the LAPM scheme was also discussed.

### 4. PRIORITISATION OF ISSUES

Matt described the process undertaken to identify the issues in the study area, including the community consultation and data analysis.

It was noted that the crash data used in the study (VicRoads crash data) did not include property damage crashes.

The Study Group raised the following issues/comments:

- Road rage incidents are an issue, for example at Miller Street.
- Tube counters were often located close to speed humps and intersections, therefore the data does not accurately reflect vehicle speeds.
- There is lack of east-west route(s) through study area.
- The study area experiences north-south rat-running.
- Local areas in North Carlton have been successfully treated and Princes Park is also being treated.
- Local streets should be treated and the traffic forced onto the arterial network.
- Historical traffic data could be analysed to determine trends and assist futureproofing.

Matt reported the results of the on-line survey of top issues/locations. The priority locations based on the on-line survey were (in order):

- Scotchmer Street;
- Rae Street;
- Brunswick Street and St Georges Road;
- Brunswick Street North; and
- Nicholson Street.

It was noted that Brunswick Street, St Georges Road and Nicholson Street were VicRoads' managed road. Ted Teo from Council explained that Council could not implement treatments on these roads but could advocate to VicRoads. It was agreed that an output of the study should be a priority list of actions for advocacy to VicRoads.

Matt sought agreement of the priority locations from the Study Group. The Study Group offered the following comments:

- Miller Street and Holden Street should be added to priority list.
- Issues on Miller Street include pedestrians/cyclists, St Georges Road intersection (peak periods), existing one-lane treatments, road rage, school traffic.
- The main issue for Scotchmer Street is at Piedimonte's - if that is not to be considered as part of the study then Scotchmer Street is not really an issue (Ted noted that the issues at Piedimonte's would be addressed through the current planning application).
- It was commented that Piedimonte's traffic management proposal was not satisfactory.
- Ted noted that on-road bike facilities on Scotchmer Street had been mentioned during the consultation process, however could not be provided without removing parking.
- There was general agreement with issues identified for Rae Street.
- Queueing in Rae Street at Alexandra Parade was particularly noted, specifically:
  - queues are often up to 200m long;
  - how much is local versus non-local traffic; and
  - cars rat-run to avoid the intersection of Nicholson Street and Alexandra Parade.
- There was general agreement with the issues identified for Brunswick Street North.

## 5. DRAFT LAPMS SCHEME DEVELOPMENT DISCUSSION

Matt invited the Study Group to break into two groups to discuss potential treatment options for the study area - north of Scotchmer Street and south of Scotchmer Street.

Potential treatments discussed were as follows.

### Miller Street

- Upgrade existing LATM treatments

### Barkly Street

- Raise existing speed humps

### Barkly Street / Rae Street

- Reverse Stop signs

### Holden Street / Rae Street

- Improve safety for cyclists

### Holden Street / Brunswick Street North

- Right turn ban into Brunswick Street North

### Rae Street / Capital City Trail

- Road closure, reverse priority (i.e. give way to trail users), or one-way (northbound)

### Brunswick Street North / Capital City Trail

- Road closure or reverse priority (i.e. give way to trail users)

### Rae Street

- Closure between Scotchmer Street and Reid Street (to enhance cycle route)
- One-way (northbound) between Church Street and Alexandra Parade
- One-way (southbound) between Reid Street and St Georges Road
- Partial/full closure at Alexandra Parade

### Lane east of Rae Street

- Install bollard to prevent through traffic (rat-running from York Street)

### Freeman Street

- Traffic calming treatment between Nicholson Street and St Georges Road
- One-way (westbound) between Nicholson Street and St Georges Road

### St Georges Road intersections (VicRoads)

- Peak hour turn bans at Miller Street and Barkly Street
- Right turn arrow for vehicles exiting Scotchmer Street

### Reid Street / St Georges Road (VicRoads)

- Install traffic signals at intersection (remove POS to north)
- Relocate tram stop to south side of intersection
- Zebra crossing on Reid Street

### Brunswick Street intersections (VicRoads)

- Crossings to facilitate cyclists crossing Brunswick Street at York Street, Newry Street and Freeman Street

### Nicholson Street intersections (VicRoads)

- Peak hour turn bans into Miller Street, Clausen Street, Barkly Street, Freeman Street and Newry Street

### Nicholson Street / Alexandra Parade (VicRoads)

- Improvements to slip lane (slip lane blocked by through traffic)

### General

- Zebra crossings at roundabouts

## 6. SUMMARY AND NEXT STEPS

Matt indicated that O'Brien Traffic would consider the outputs from the meeting and develop a draft LAPM scheme in consultation with Council.

Ted outlined the next round of community consultation that would take place to ascertain the community's views of the draft scheme. Following the community consultation, the Local Area Study Group will meet again to discuss the community response and amend the draft plan.

The next meeting of the Study Group will be in May 2018.

## 9. CLOSE OF MEETING

Councillor McEvoy asked the Study Group to indicate their satisfaction with the format of the meeting.

Matt thanked the Study Group for their participation and closed the meeting at 9:00pm.

**COMMUNITY CONSULTATION - ON-LINE SURVEY/INTERACTIVE MAP:  
DRAFT LAPM SCHEME AND SURVEY RESPONSES**

YOUR SAY  
YARRA

Taking it to the streets –  
North Fitzroy Local Area Place Making

Visit [www.yoursayyarra/improving-northfitzroy](http://www.yoursayyarra/improving-northfitzroy)  
to add your feedback to an online, interactive map

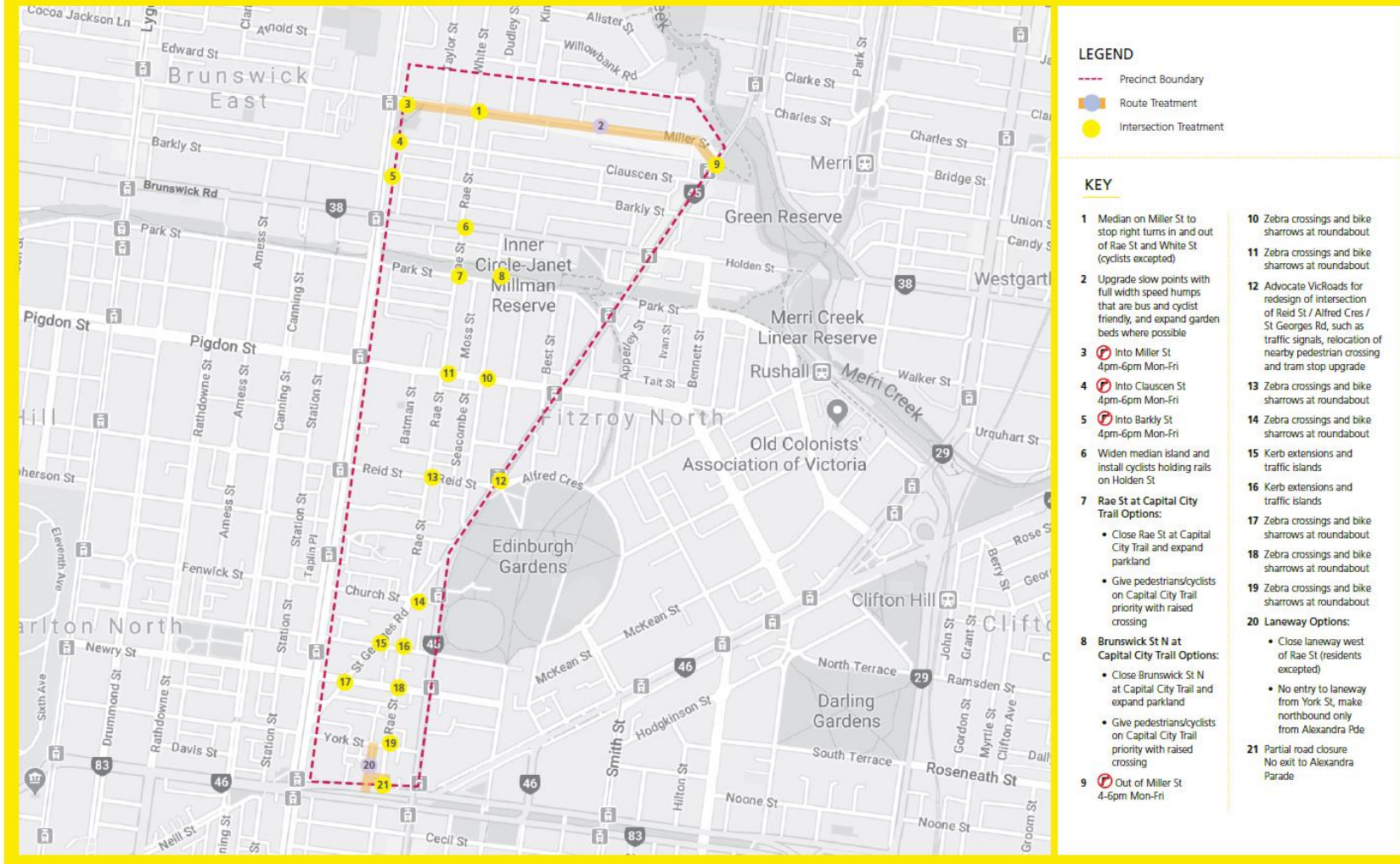


FIGURE F1: DRAFT LAPM SCHEME PRESENTED TO THE COMMUNITY



#	DESCRIPTION	RESPONSE	
		LIKE	DISLIKE
1	Median on Miller St to stop right turns in and out of Rae St and White St (cyclists excepted)	85	73
2	Upgrade slow points with full width speed humps that are bus and bike friendly, and expand garden beds where possible	40	24
3	No right turn from Nicholson St into Miller St 4pm-6pm Mon-Fri	25	47
4	No right turn from Nicholson St into Clauscen St 4pm-6pm Mon-Fri	20	32
5	No right turn from Nicholson St into Barkly St 4pm-6pm Mon-Fri	21	30
6	Widen median island and install cyclists holding rails on Holden Street at Rae St intersections	89	9
7A	Close Rae St at Capital City Trail and expand parkland	69	67
7B	Give pedestrians and bike riders on Capital City Trail priority with a raised crossing at Rae St	79	8
8A	Close Brunswick St North at Capital City Trail and expand parkland	66	106
8B	Give pedestrians and bike riders on Capital City Trail priority with a raised crossing at Brunswick St North	86	16
9	No right turn from Miller St into St Georges Rd 4pm-6pm Mon-Fri	45	22
10	Zebra crossing and bike sharrows at roundabout of Scotchmer St and Brunswick St North	75	9
11	Zebra crossing and bike sharrows at roundabout of Scotchmer St and Rae St	55	6
12	Advocate VicRoads for redesign of intersection of Reid St / Alfred Cres / St Georges Rd, such as traffic signals, relocation of nearby pedestrian crossing and tram stop upgrade	105	16
13	Zebra crossing and bike sharrows at roundabout of Reid St and Rae St	48	13
14	Zebra crossing and bike sharrows at roundabout of St Georges Rd South, Rae St and Church St	28	5

#	DESCRIPTION	RESPONSE	
		LIKE	DISLIKE
15	Kerb extensions and new traffic islands at Freeman St and St Georges Rd South	24	6
16	Kerb extensions and new traffic islands at Freeman St and Rae St	23	8
17	Zebra crossing and bike sharrows at roundabout of Newry St and St Georges Rd South	16	3
18	Zebra crossing and bike sharrows at roundabout of Newry St and Rae St	32	5
19	Zebra crossing and bike sharrows at roundabout of York St and Rae St	32	1
20A	Close laneway west of Rae St (residents excepted)	18	3
20B	No entry to laneway behind 1-37 Rae St from York St, make northbound only from Alexandra Pde	31	5
21	Partial road closure on Rae St - No exit to Alexandra Pde	64	43

TABLE F1: ON-LINE SURVEY RESULTS - PROPOSED LAPM TREATMENTS

**LOCAL AREA STUDY GROUP MEETING 2:  
THURSDAY 20<sup>TH</sup> SEPTEMBER 2018  
BARGOONGA NGANJIN NORTH FITZROY LIBRARY  
MINUTES**

## LOCAL AREA PLACE MAKING STUDY: SCOTCHMER

### MINUTES OF LOCAL AREA STUDY GROUP MEETING 2

THURSDAY 20<sup>TH</sup> SEPTEMBER 2018, BARGOONGA NGANJIN NORTH FITZROY LIBRARY

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#### 1. ATTENDEES

Ted Teo, Senior Transport Engineer	Yarra City Council
Danny Millican, Acting Manager Traffic and Civil Eng.	Yarra City Council
Karen Wong, Senior Traffic Engineer	Yarra City Council
Peter Eckersley, Senior Active Transport Project Officer	Yarra City Council
Councillor Mike McEvoy	Yarra City Council
Matt Harridge, Director	O'Brien Traffic
Jemima Macaulay, Senior Associate	O'Brien Traffic
Andrew Tran, Transport Engineer	Moreland City Council
██████████	Brunswick Street North
██████████	White Street
██████████	Rae Street
██████████	Rae Street
██████████	Merri Creek Primary School
██████████	Barkly Street
██████████	Miller Street

#### *Apologies*

Councillor Jackie Fristacky	Yarra City Council
Councillor Misha Coleman	Yarra City Council
██████████	Rae Street
██████████	Freeman Street

#### 2. WELCOME AND INTRODUCTION

The meeting was opened by Ted Teo at 6:30pm.

Ted invited each person around the table to introduce themselves and noted apologies from absent volunteers.

A submission from David Nicholds was tabled (refer Attachment A).

### 3. PREVIOUS MINUTES AND CHANGES

No changes to the Minutes of the Local Area Study Group Meeting 1 were recorded.

### 4. SUMMARY OF COMMUNITY CONSULTATION

Ted presented an overview of the community consultation and noted the response rate was the highest of the three LAPM studies. In particular:

- 3500 brochures were delivered to Yarra residents, 500 brochures were delivered to Moreland residents and 242 brochures were mailed out to non-resident owners;
- 55 people attended the 2 information sessions;
- The response rate was 12% (including Social Pinpoint users, email responses and telephone calls).

### 5. LAPM PROPOSALS - RESPONSE TO COMMUNITY CONSULTATION

The LASG was provided a document prepared by O'Brien Traffic outlining the results of the community consultation for each proposed treatment.

Where the results of the consultation provided clear direction, O'Brien Traffic provided a recommendation to *proceed* or *not proceed*.

Where the community response was less clear, the LASG was invited to discuss the proposed treatment. Hence the discussion focussed around the proposed treatments as follows.

#### ***Proposed treatment 1 – Median on Miller Street to stop right turns in and out of Rae Street and White Street (cyclists excepted)***

There was concern that the proposed treatment would divert traffic to other streets (eg. Taylor Street) and no countermeasures for other streets are being proposed. Turn bans to mitigate traffic impact was suggested. Andrew Tran (Moreland City Council) noted Glenlyon Road carries approximately 2,000 vehicle per day.

*Recommendation:* Proceed on a trial basis, monitor traffic impact on surrounding streets and address issues as they arise. O'Brien Traffic to provide potential countermeasures in the study report to that could be adopted if required.

***Proposed treatment 2 – Upgrade slow points on Miller Street with speed humps that are bus and bike friendly, and expand garden beds where possible***

Ted explained that a cut through would be provided for cyclists behind the garden beds at the slow points.

*Recommendation:* Proceed

***Proposed treatments 3 to 5 – No right turn bans from Nicholson Street into Miller Street, Clausen Street and Barkly Street 4-6pm Monday to Friday***

While the community consultation showed a lack of support for the right turn bans, there was concern that if the turn bans were not implemented, there would be no change in traffic volumes in these streets. The group requested alternative treatments be proposed.

Ted advised that a change of stop priority was being considered at Barkly Street and Rae Street to address sight line and design issues with the current arrangement.

*Recommendation:* Do not proceed. O'Brien Traffic to provide potential countermeasures in the study report to that could be adopted if required.

***Proposed treatments 7A, 7B, 8A and 8B - Closure of Rae Street and Brunswick Street North at Capital City Trail or priority for pedestrians/cyclists of Capital City Trail at the intersections***

Ted advised that a full road closure of Brunswick Street North at the Capital City Trail was not practical at this time as VicRoads will not consider the removal of right turn bans into Scotchmer Street from St Georges Road for southbound traffic between 7:30 and 9:30am weekdays. The route is also used by delivery vehicles to access Piedimonte's in a southbound direction. There was some dismay expressed that this treatment was presented to the community for consideration when it wasn't a viable option.

There was a strong view that the alternative option for Brunswick Street North (i.e. priority for Capital City Trail users) was not sufficient to address the traffic and safety issues.

The LASG requested alternative options be considered. Alternative options suggested were a partial (northbound) closure at Capital City Trail and a right turn ban at Holden Street during the AM peak period.

There was concern that if a road closure of Rae Street was implemented, traffic would divert to Brunswick Street North (if that remained opened).

*Recommendation:* Consider options further and potentially implement options on a trial basis.

### ***Proposed treatment 9 – No right turn from Miller Street into St Georges Road, 4-6pm Monday to Friday***

While there was concern expressed regarding the impact the proposed turn ban would have on parents collecting children from after school care, the benefits of the proposed turn ban were agreed.

*Recommendation:* Proceed

### ***Proposed treatment 20A/B – Close laneway west of Rae Street (residents accepted) or No Entry to laneway from York Street (laneway northbound only from Alexandra Parade)***

The preferred option, based on the results of the community consultation, was for a No Entry to the laneway at York Street (i.e. northbound only from Alexandra Parade) and this was generally supported by the LASG.

*Recommendation:* Proceed with No Entry to the laneway west of Rae Street at York Street

### ***Proposed treatment 21 – Partial road closure on Rae Street – no exit to Alexandra Parade***

General agreement to the partial road closure.

*Recommendation:* Proceed

## **6. PROJECTS TO ADVOCATE TO VICROADS**

Jemima Macaulay explained that an outcome of the study was to provide a priority list of projects on arterial roads for advocacy to VicRoads. She listed the following projects:

### **Nicholson Street**

- Reduce speed limit
- Raised threshold treatments at side street intersections for improved pedestrian access.

### **Alexandra Parade**

- More time for pedestrians and trams to cross along Nicholson Street and Brunswick Street.

### **Brunswick Street and St Georges Road**

- Reduce speed limit
- Tram stop upgrades

- Widen crossing point at Capital City Trail to maximise capacity for pedestrians and bike riders crossing at the traffic lights
- Scotchmer Street intersection - filtered right turns in and out of Scotchmer Street, lane arrow markings, bike signal head starts
- Raised threshold treatments at side street intersections for improved pedestrian access.

Ted noted that an intersection upgrade of St Georges Road/Reid Street was also on Council's list of advocacy projects.

## **7. OTHER DISCUSSION**

There was frustration expressed regarding the extensive consultation over a long period through the LAPM process but lack of action to date.

## **8. NEXT STEPS**

Ted indicated that Council will notify the community of the final draft plan in October 2018.

O'Brien Traffic will develop cost estimates and priorities.

The draft LATM Scheme will go to Council at its meeting in November 2018 and residents will have an opportunity to address Council at that meeting.

## **9. CLOSE OF MEETING**

Ted thanked the Study Group for their participation and closed the meeting at 8:20pm.



# Attachment A

---

## *Comments from absent volunteers*

**From:** [REDACTED]  
**Sent:** Monday, 10 September 2018 10:11 PM  
**To:** Teo, Ted <Ted.Teo@yarracity.vic.gov.au>  
**Subject:** Re: Taking it to the streets North Fitzroy - Local Area Study Group Meeting #2 - Thursday 20 September

Hi Ted,

Unfortunately I will be away on 20 September when the next meeting of the Local Area Study Group is scheduled.

I have reviewed the preliminary results and make the following brief comments, some of which I have expressed before:

- Whatever happens with Rae St and Brunswick St North, priority should be given to bikes over cars at both of the crossings of the Capital City Trail. This will improve the lot of the many cyclists who use this trail. However it will not address the problem of rat-run traffic in the area.
- I like the idea of Rae St being closed at the Capital City Trail but recognise that this could increase the rat-run traffic in Brunswick St North. I believe the proposal I have previously made which includes one way directions for both Rae St and Brunswick St North at the CCT, together with other minor changes, would reduce rat-run traffic while still providing (slightly more circuitous) access to local residents.
- The improvement proposed to the median strip in Holden St opposite Rae St will contribute to improved safety for cyclists and I strongly commend it.
- The partial road closure at the south end of Rae St will greatly improve the quality of life for residents in that immediate area. While it will inconvenience some local residents, including myself, it must be recognised that some changes of habits by local residents may be required to contribute to improved quality of life for their neighbours.
- Advocating to VicRoads for a complete redesign of the dangerous and difficult Richardson St/St Georges Rd/Alfred Crescent intersection is essential.

As a general observation, it is not possible to satisfy the concerns of all residents and I look to the council's professional engineers to propose solutions which are appropriate for the majority of residents and which address real concerns. Having done that, the council must be prepared to advise some residents/merchants that the proposal is for the greater good and that some residents/merchants will have to make minor changes in habits as a result.

While I will be away I will still have email access and I would welcome the opportunity to review anything further that you distribute and I hope that I will be available if any further meetings take place.

Best regards, [REDACTED]

## *Email from member of Local Area Study Group Meeting*

Hi Ted,

A couple of things. Firstly, thanks for installing the traffic data collectors/counters again. Once you have the data, I would really appreciate an update.

Secondly, thanks for the minutes of the last meeting. I now regret not formally requesting the first meetings minutes to be amended as they have been accepted as true and correct. As the minutes are a record, I wish to state I am not happy to accept the minutes from the second meeting. I will try and keep my responses brief.

*Proposed treatments 7A, 7B, 8A and 8B - Closure of Rae Street and Brunswick Street North at Capital City Trail or priority for pedestrians/cyclists of Capital City Trail at the intersections*

*..... The route is also used by delivery vehicles to access Piedimonte's in a southbound direction.*

The response tells half the story. I believe more was stated at the meeting and a truer summary of the points made in relation to the matter would read;

*..... Due to the morning turn bans, vehicles (including delivery vehicles) use Brunswick St Nth as a route to access businesses on Scotchmer St (most significantly Piedimonte's). The route is now regularly used by delivery vehicles in both a northbound and southbound direction at all times of the day.*

Also;

*.....There was a strong view that the alternative option for Brunswick Street North (i.e. priority for Capital City Trail users) was not sufficient to address the traffic and safety issues.*

In addition, the question was also raised if consideration had been given to the potential traffic congestion that could occur, particularly on Holden St, if the alternative option for Brunswick St Nth (priority for Capital City Trail users) was implemented, given the high volume of traffic using Brunswick St Nth, meeting with the high volume of cyclists using the Capital City trail (particularly during peak hours), and the close proximity of the Capital City Trail to Holden St.

### *7. Other business*

*There was frustration expressed regarding the extensive consultation over a long period through the LAPM process but lack of action to date.*

I would also add to the above,

There was frustration expressed with regard to lack of traffic management strategies to address the traffic issues, particularly the north/south "rat-run". There was also concern that greater importance was placed on community responses to traffic management strategies rather than recommendations by Traffic Engineers.

Finally, I have received a response to my FOI to Vic Roads and will be forwarding this on to the team.

Thanks for your assistance.

Kind regards,

■■■■

**TRAFFIC IMPACT ASSESSMENT:  
RAE STREET AND BRUNSWICK STREET NORTH TRAFFIC MANAGEMENT  
OPTIONS**



Suite 2.03, 789 Toorak Road  
Hawthorn East Victoria 3123

T: +61 3 9804 3610  
W: [obrientraffic.com](http://obrientraffic.com)

8 November 2018

Ted Teo  
City of Yarra  
PO Box 168  
Richmond VIC 3121

Email: [ted.teo@yarracity.vic.gov.au](mailto:ted.teo@yarracity.vic.gov.au)

Dear Ted

## SCOTCHMER PRECINCT – NORTH FITZROY

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I refer to your request for a traffic engineering assessment of the impact of various traffic management treatment options on the surrounding road network, specifically:

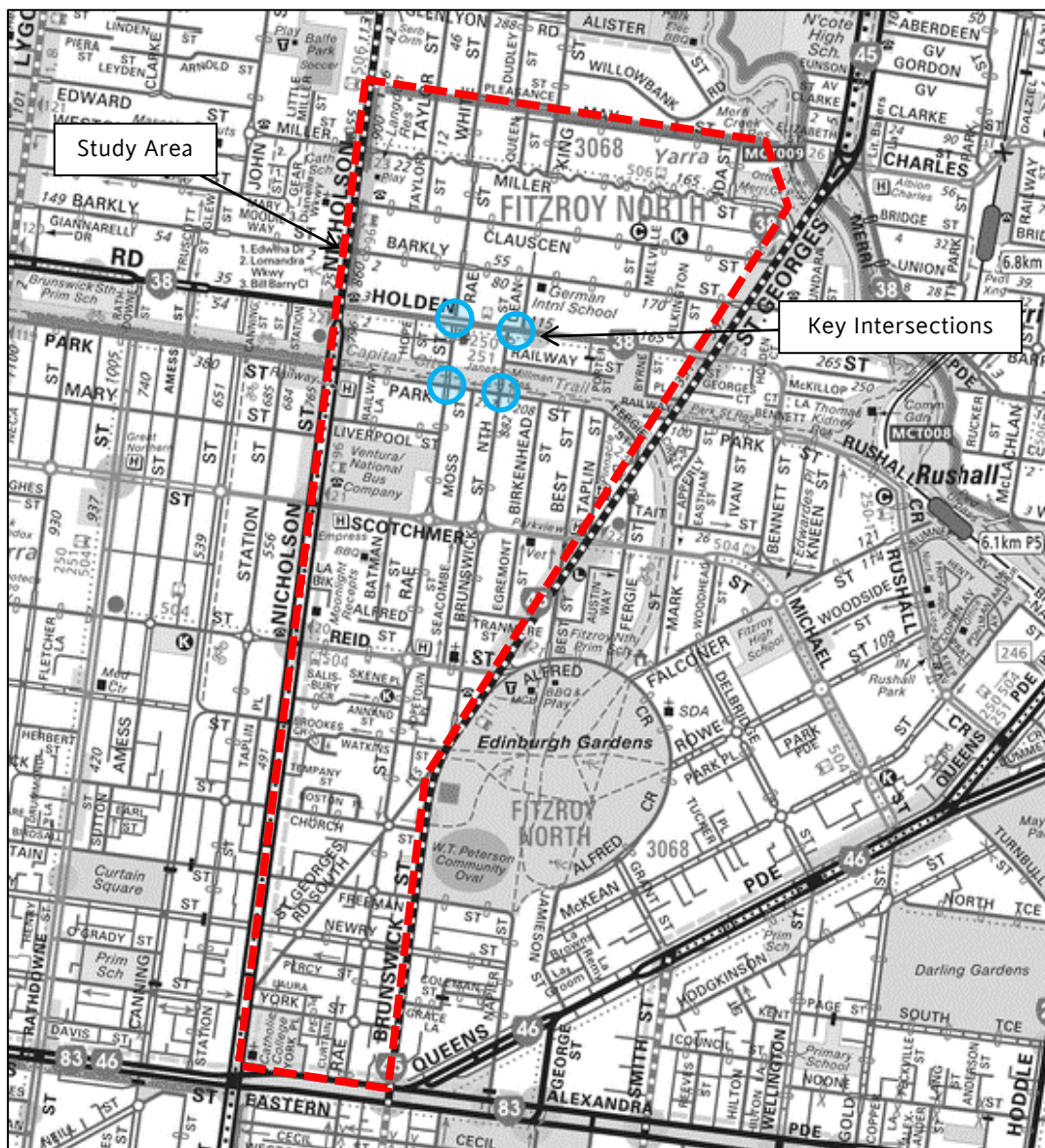
1. Right turn ban on Holden Street at Brunswick Street North;
2. Median island on Holden Street at Brunswick Street North (i.e. left-in/left-out only);
3. Median island on Holden Street at Brunswick Street North and Dean Street (i.e. left-in/left out only);
4. Partial closures – southbound closure on Rae Street and northbound closure on Brunswick Street North at the Capital City Trail; and
5. Full closure at Rae Street at the Capital City Trail and median island on Holden Street at Brunswick Street North and Dean Street.

In the course of preparing this letter we have undertaken turning movement counts at key intersections and determined the likely traffic distribution and implications for each treatment option. Our assessment is as follows.

## BACKGROUND

Yarra City Council is undertaking a Local Area Place Making (LAPM) Study in the Scotchmer Precinct, North Fitzroy.

The study area is shown in **Figure 1** and is bounded by Nicholson Street, May Street, St Georges Road, Brunswick Street and Alexandra Parade in North Fitzroy.



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FIGURE 1: LOCATION OF SUBJECT SITE

As part of the LPM Study, Council is considering various treatment options to reduce traffic volumes and rat running, and to improve pedestrian and cyclist safety, on Brunswick Street North and Rae Street in the vicinity of the Capital City Trail.

## EXISTING CONDITIONS

### Key Intersections

The Rae Street / Holden Street intersection is a cross intersection with Stop controls on Rae Street and a median island restricting access to left-in/left-out. An aerial photo of the intersection of Rae Street / Holden Street is shown in Figure 2.



FIGURE 2: AERIAL PHOTO OF RAE STREET / HOLDEN STREET INTERSECTION

The Rae Street / Park Street intersection is a cross intersection with Stop controls on Rae Street. Park Street permits one-way westbound traffic flow. An aerial photo of the intersection of Rae Street / Park Street is shown in **Figure 3**.



FIGURE 3: AERIAL PHOTO OF RAE STREET / PARK STREET INTERSECTION

The Brunswick Street North / Dean Street / Holden Street intersection is a staggered intersection with Stop controls on Brunswick Street North and Dean Street. An aerial photo of the intersection of Brunswick Street North / Dean Street / Holden Street is shown in **Figure 4**.



FIGURE 4: AERIAL PHOTO OF BRUNSWICK STREET NORTH / DEAN STREET / HOLDEN STREET

The Brunswick Street North / Park Street intersection is a cross intersection with Give Way controls on Park Street. Park Street is restricted to one-way westbound to the west of Brunswick Street North and one-way eastbound to the east of Brunswick Street North. An aerial photo of the intersection of Brunswick Street North / Park Street is shown in Figure 5.



FIGURE 5: AERIAL PHOTO OF BRUNSWICK STREET NORTH / PARK STREET

### Existing Traffic Volumes

O'Brien Traffic commissioned turning movement counts of the 4 key intersections on Thursday 18 October 2018 at the following times:

- 6:30am to 9:30am; and
- 3:30pm to 7:00pm.



These times were selected as they represent typical commuter peak periods.

The existing on-road peak hour volumes are presented in **Figures 6 – 7**.



**FIGURE 6: EXISTING TRAFFIC VOLUMES – AM PEAK HOUR (7AM – 8AM)**



**FIGURE 6: EXISTING TRAFFIC VOLUMES – PM PEAK HOUR (5:30PM – 6:30PM)**

## TRAFFIC RE-DISTRIBUTION & IMPACT

For each treatment option, vehicles will be required to find an alternative route to their destination. Where there is a convenient alternative local route, the majority of vehicles will simply transfer to it. However, where the alternative local route is not convenient, a proportion of vehicles will re-route to the arterial road network.

In this case, it is assumed that 40% of traffic will transfer to the arterial network where an obvious alternative route is not available.

This is consistent with Council's findings of the *Stage 1 Works Review – LATM 16 Victoria Precinct (Richmond)* (Stage 1 constructed in 2014). This post construction evaluation found reductions in traffic volumes of 39-65% in streets where traffic movements were restricted (eg. left in/left out treatments) without an increase in traffic volumes on other local streets.

Based on the above, the likely traffic re-distribution of each traffic management option is discussed as follows.

### Option 1 – Right turn ban from Holden Street to Brunswick Street North

Option 1 will ban the right turn from Holden Street in Brunswick Street North. This will impact vehicles currently travelling north to south via the Rae Street - Holden Street - Brunswick Street North route. It is likely that some vehicles currently utilising this route will transfer to Dean Street, turn right into Holden Street, then left into Brunswick Street North.

The following assumptions have been made in regard to the traffic re-distribution of Option 1:

- Traffic approaching from Holden Street west (Nicholson Street intersection) to turn right into Brunswick Street North will transfer to/stay on the arterial road network;
- Of the existing traffic turning left from Rae Street (north) into Holden Street, 90% currently turns right into Brunswick Street North and 10% continues eastbound on Holden Street;
- Of the existing traffic turning left from Rae Street (north) into Holden Street, then right into Brunswick Street North:
  - 40% will transfer onto the arterial roads
  - 60% will transfer onto Dean Street, turn right onto Holden Street, then left onto Brunswick Street North.

The traffic redistribution for Option 1, for the AM and PM peak hours, is shown in **Figures 7 and 8** respectively.

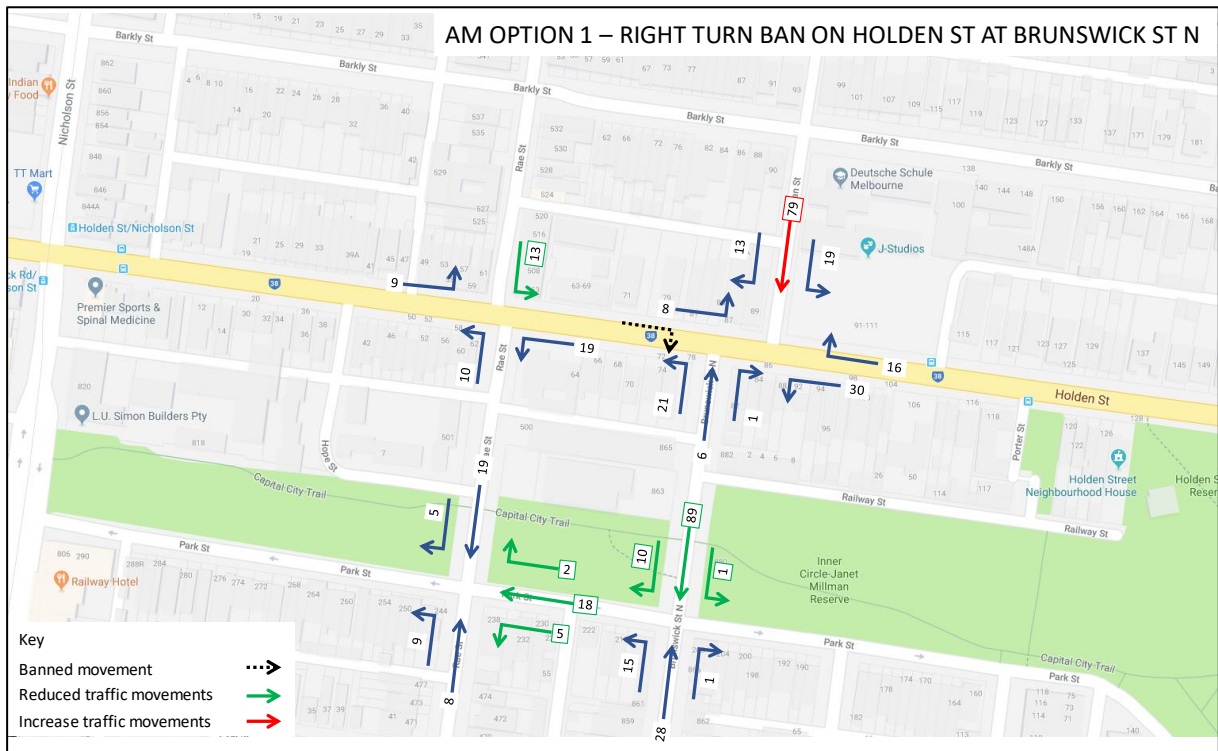


FIGURE 7: OPTION 1 – AM TRAFFIC RE-DISTRIBUTION

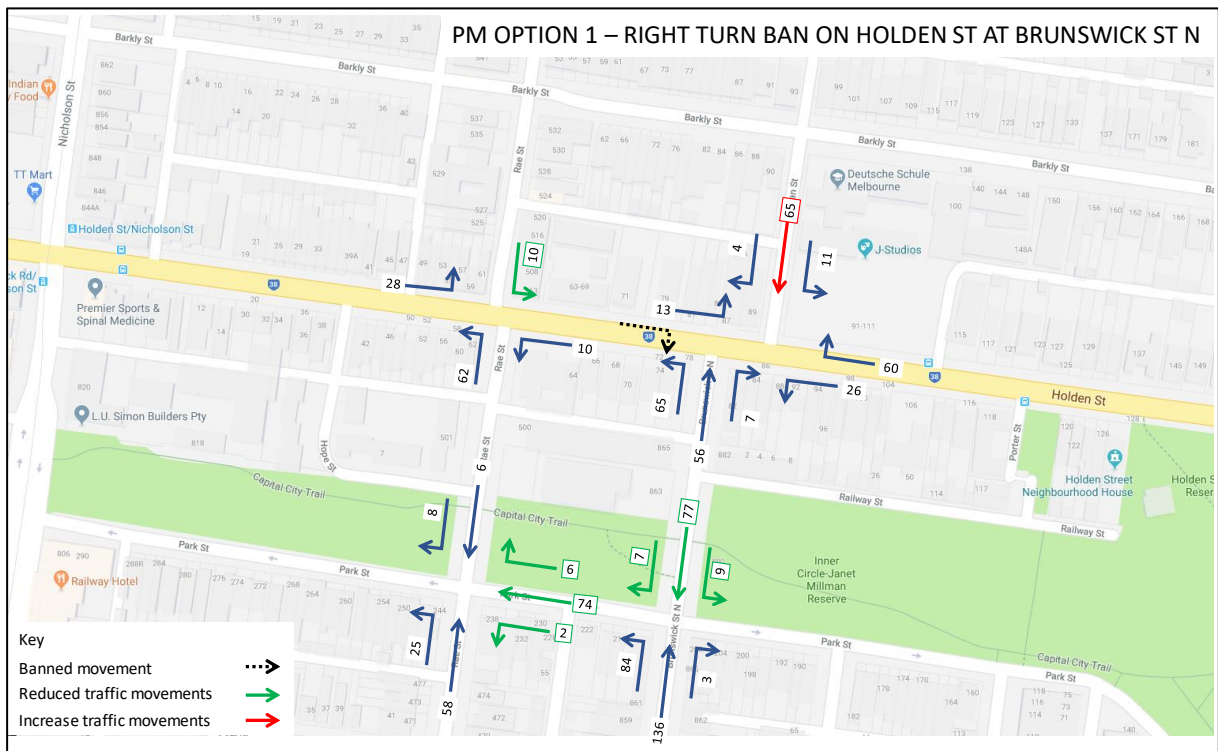


FIGURE 8: OPTION 1 – PM TRAFFIC RE-DISTRIBUTION

## Option 2 – Median island on Holden Street at Brunswick Street North

Option 2 will install a median island on Holden Street at Brunswick Street North, restricting Brunswick Street North to left-in/left-out. This option will prevent the right turn movement into Brunswick Street North from Holden Street, similar to Option 1. In addition it will prevent vehicles travelling from south to north via the Brunswick Street North – Holden Street - Dean Street route. It is likely that vehicles travelling north will transfer onto Park Street to access St Georges Road / Nicholson Street.

The following assumptions have been made in regard to the traffic re-distribution of Option 2:

- Existing traffic turning right from Holden Street to Brunswick Street North will transfer as per Option 1.
- Of the existing traffic turning right from Brunswick Street North to Holden Street (including traffic continuing into Dean Street):
  - 40% will transfer onto the arterial network
  - 50% will transfer eastbound on Park Street to St Georges Road
  - 10% will transfer westbound on Park Street to Nicholson Street.

The traffic redistribution for Option 2, for the AM and PM peak hours, is shown in **Figures 9 and 10** respectively.

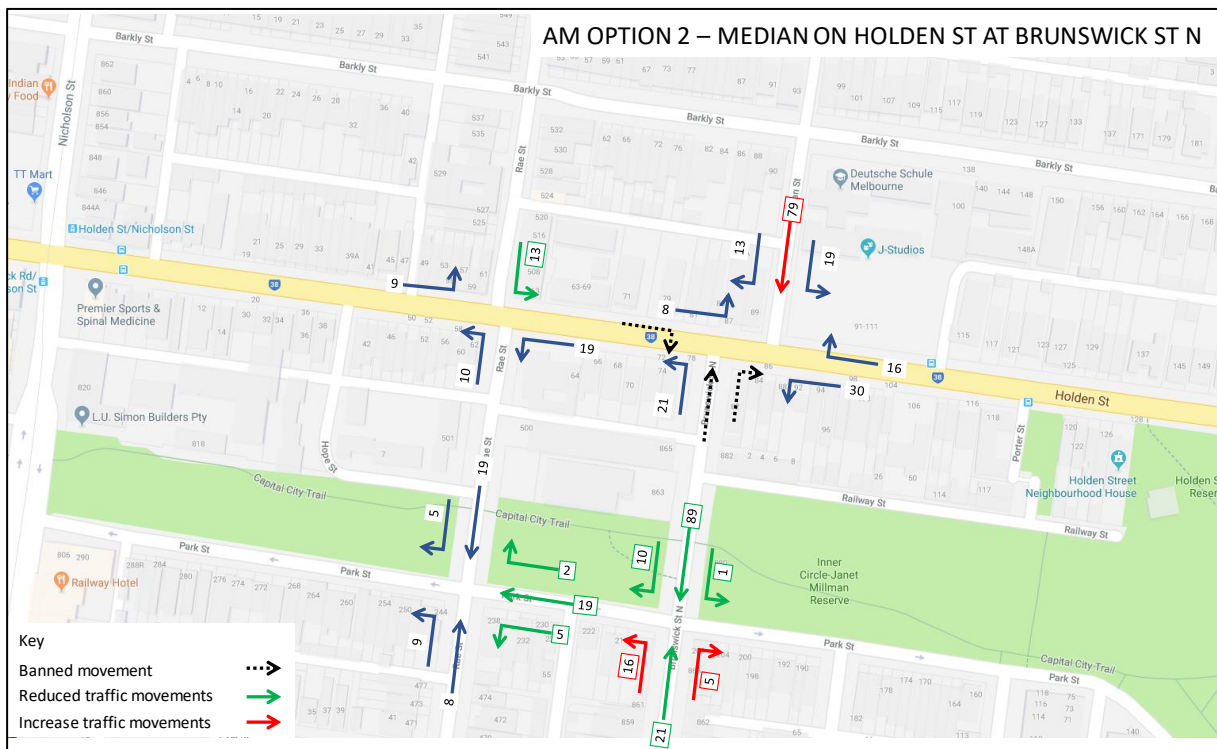


FIGURE 9: OPTION 2 – AM TRAFFIC RE-DISTRIBUTION

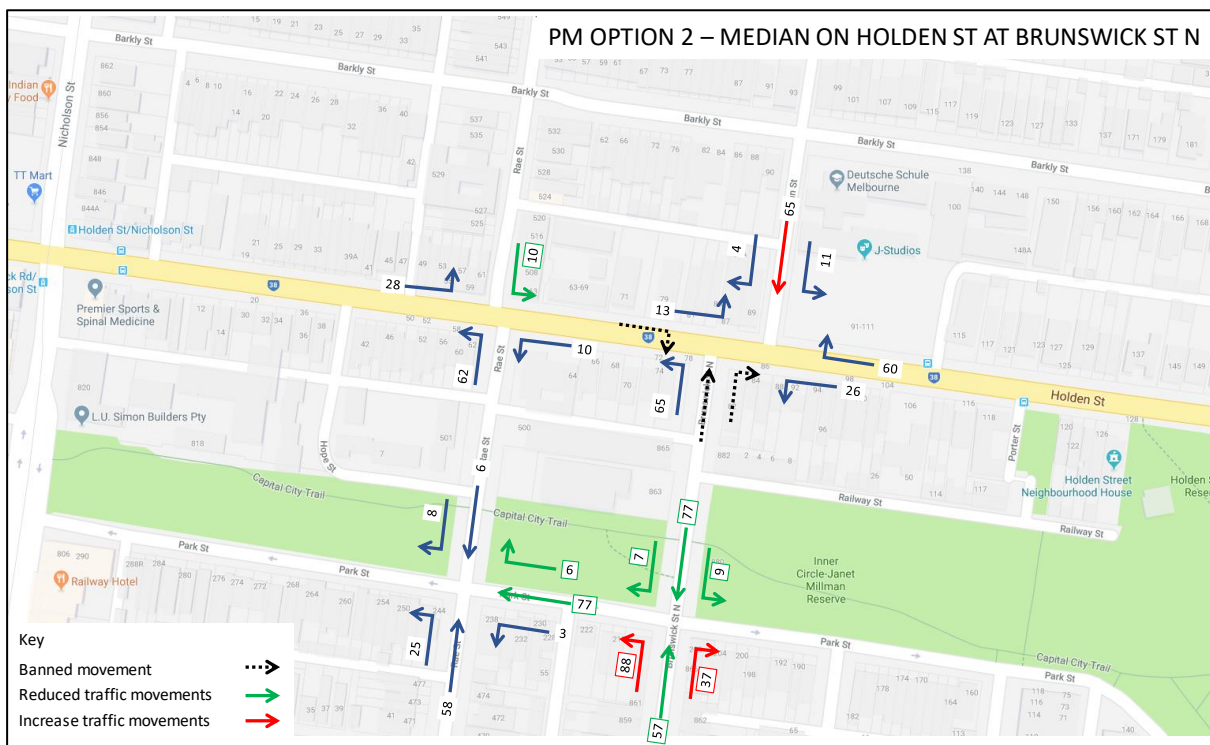


FIGURE 10: OPTION 2 – PM TRAFFIC RE-DISTRIBUTION

### Option 3 – Median island on Holden Street at Brunswick Street North and Dean Street

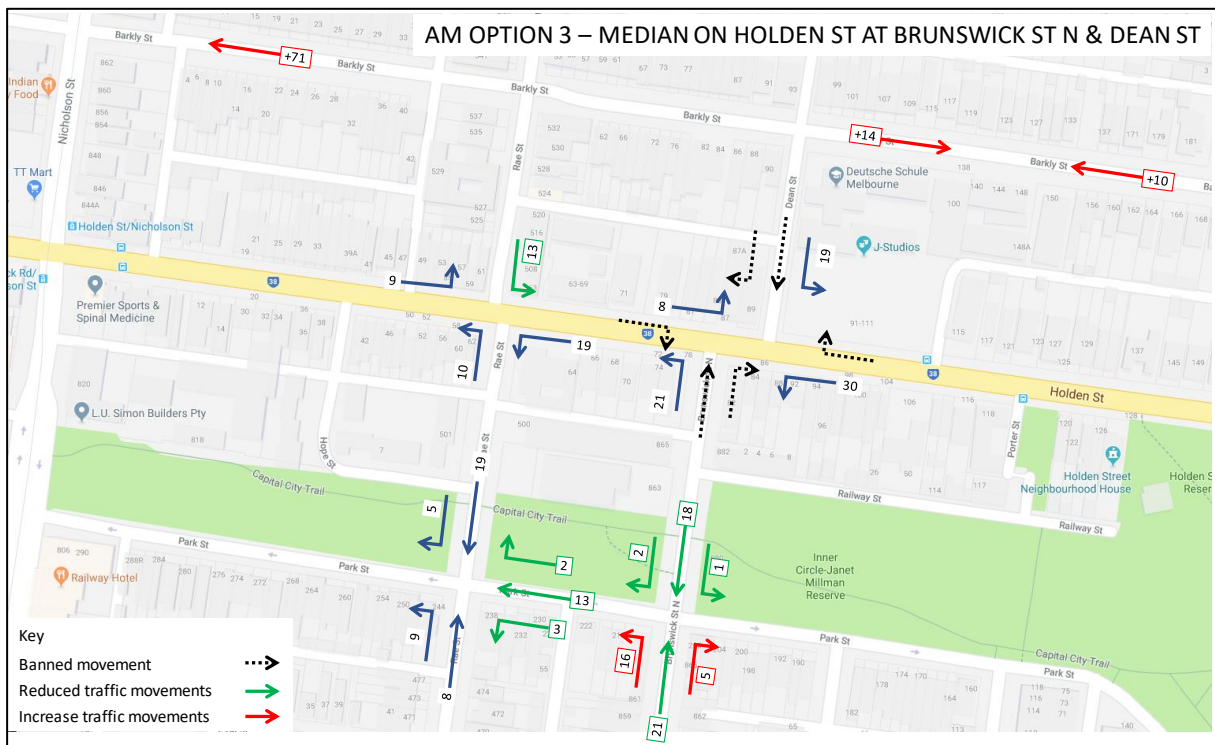
Option 3 will install a median island on Holden Street at Brunswick Street North and Dean Street, restricting both streets to left-in/left-out only. This option will restrict vehicles from travelling between the north and south of Holden Street via the local road network. It is likely that vehicles travelling north will transfer onto Park Street and vehicles travelling south will transfer onto Barkley Street to access St Georges Road or Nicholson Street.

The following assumptions have been made in regard to the traffic re-distribution of Option 3:

- Existing traffic turning right from Holden Street to Brunswick Street North will transfer as per Options 1 and 2.
- Existing traffic turning right from Brunswick Street North to Holden Street (including traffic continuing to Dean Street) will transfer as per Option 2.
- Restricting Dean Street to left-in/left-out will transfer traffic currently travelling from the north side to the south side of Holden Street onto the arterial network. It is assumed that of the existing traffic currently travelling north to south:
  - 40% will transfer to (i.e. stay on) the arterial network without travelling through the local area;
  - 50% will transfer to Barkly Street and travel westbound to Nicholson Street;
  - 10% will transfer to Barkly Street and travel eastbound to St Georges Road.

- Of the existing traffic turning right into Dean Street from Holden Street:
  - 40% will transfer to the arterial network;
  - 60% will transfer to Barkly Street (westbound from St Georges Road).

The traffic redistribution for Option 3, for the AM and PM peak hours, is shown in **Figures 11 and 12** respectively.



**FIGURE 11: OPTION 3 – AM TRAFFIC RE-DISTRIBUTION**

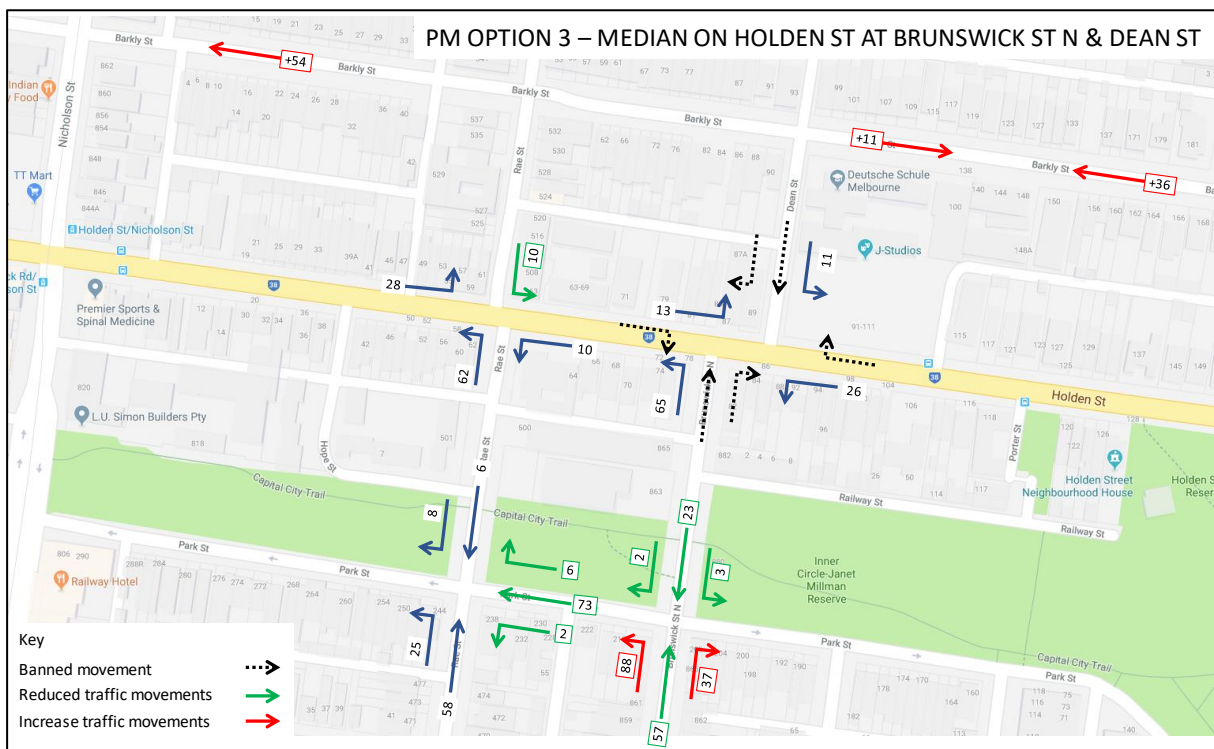


FIGURE 12: OPTION 3 – PM TRAFFIC RE-DISTRIBUTION

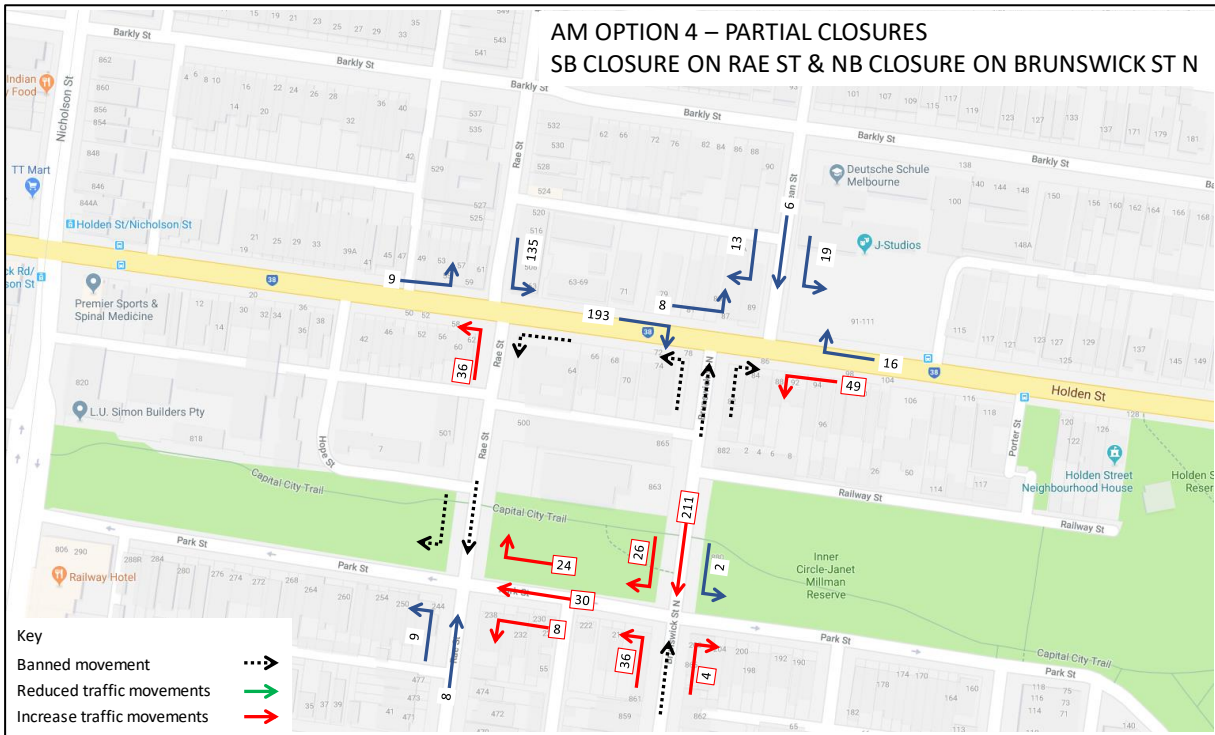
### Option 4 – Rae Street southbound closure and Brunswick Street North northbound closure at Capital City Trail

Option 4 will close Rae Street to southbound traffic and close Brunswick Street North to northbound traffic at the Capital City Trail. This option is anticipated to shift existing northbound/southbound traffic between Rae Street and Brunswick Street North based on the new one-way traffic flows.

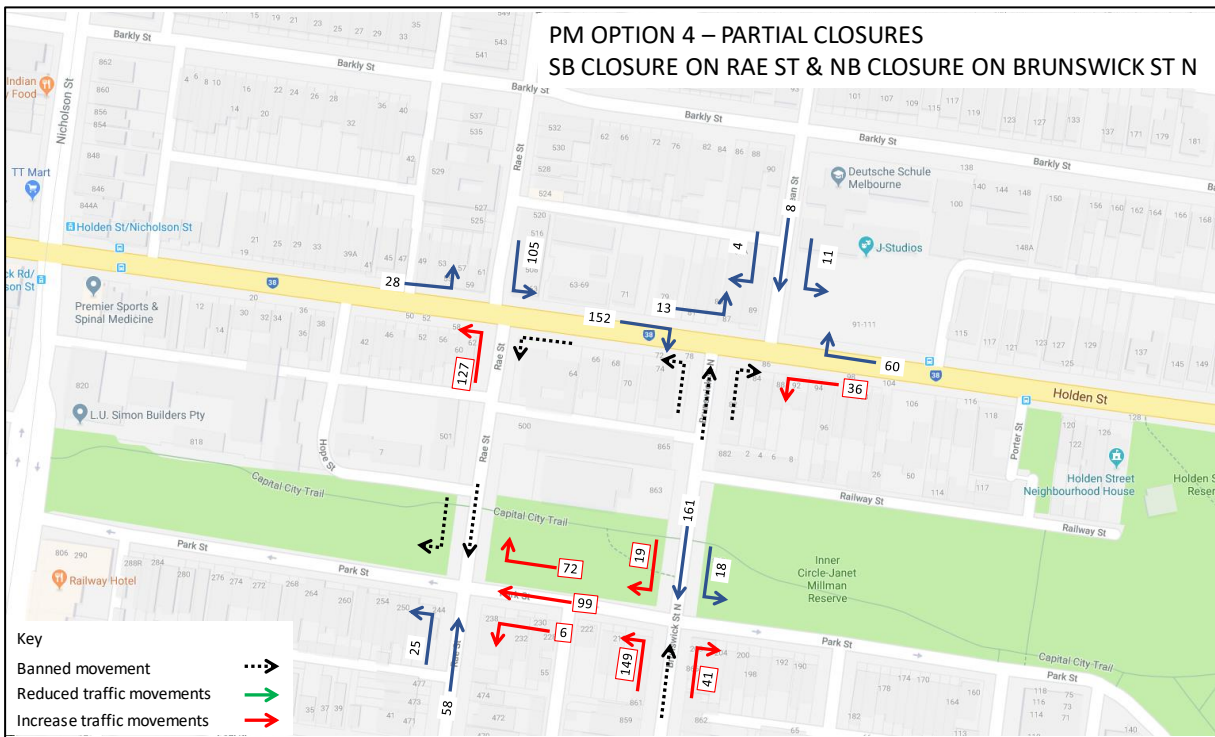
The following assumptions have been made in regard to the traffic re-distribution of Option 4:

- Existing traffic turning right from Brunswick Street North into Holden Street (including into Dean Street) will transfer as per Option 2.
- Existing traffic turning left from Brunswick Street North into Holden Street will transfer to Rae Street;
- Existing traffic turning left from Holden Street into Rae Street will turn left into Brunswick Street North.

The traffic redistribution for Option 4, for the AM and PM peak hours, is shown in **Figures 13 and 14** respectively.



**FIGURE 13: OPTION 4 – AM TRAFFIC RE-DISTRIBUTION**



**FIGURE 14: OPTION 4 – PM TRAFFIC RE-DISTRIBUTION**



## Option 5 – Rae Street closure at Capital City Trail and median island on Holden Street at Brunswick Street North and Dean Street

Option 5 will close Rae Street at the Capital City Trail and install a median island on Holden Street at Brunswick Street North and Dean Street, restricting traffic movements at both streets to left-in/left-out only. This option will restrict vehicles from travelling between the north and south of Holden Street via the local road network and transfer existing traffic travelling north/south on Rae Street to Brunswick Street North.

The following assumptions have been made in regard to the traffic re-distribution of Option 5:

- Existing traffic turning right from Brunswick Street North into Holden Street (including traffic continuing into Dean Street) will transfer as per Option 2;
- Existing traffic travelling from north of Holden Street (via Rae street or Dean Street) to south of Holden Street will transfer as per Option 3;
- Existing traffic turning left at Rae Street will transfer to Brunswick Street North.

The traffic redistribution for Option 5, for the AM and PM peak hours, is shown in **Figures 15 and 16** respectively.

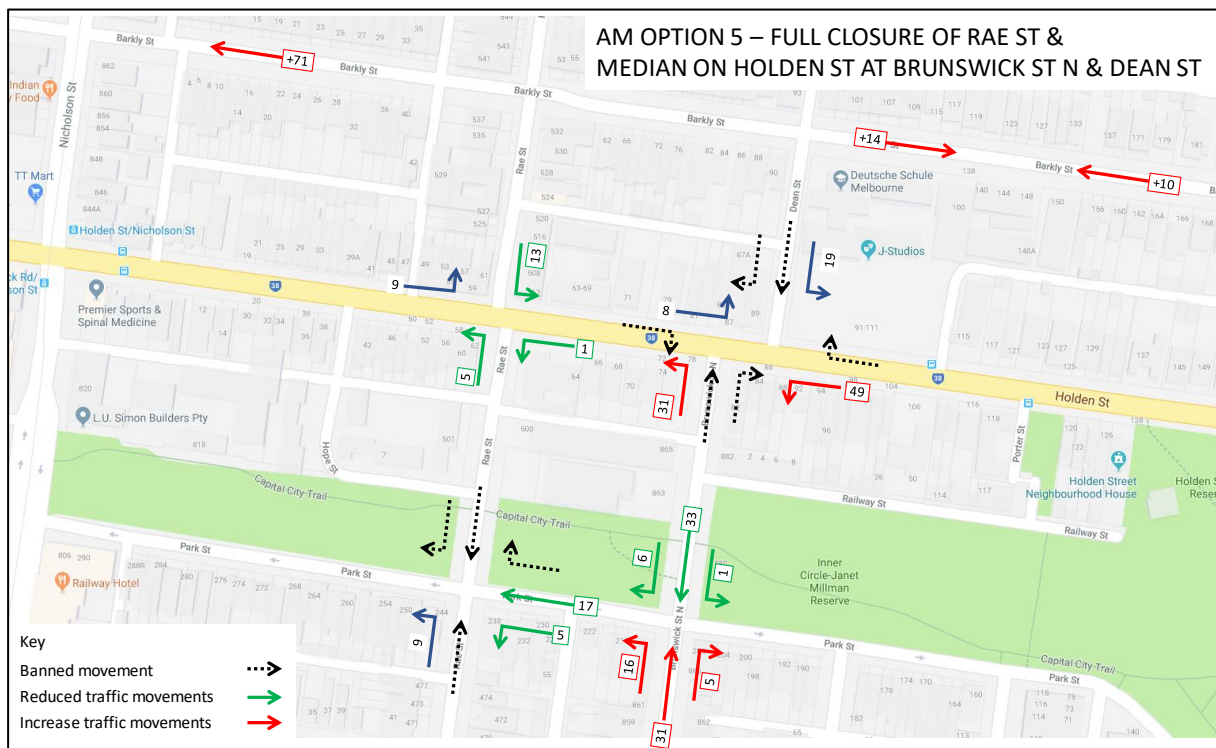


FIGURE 15: OPTION 5 – AM TRAFFIC RE-DISTRIBUTION

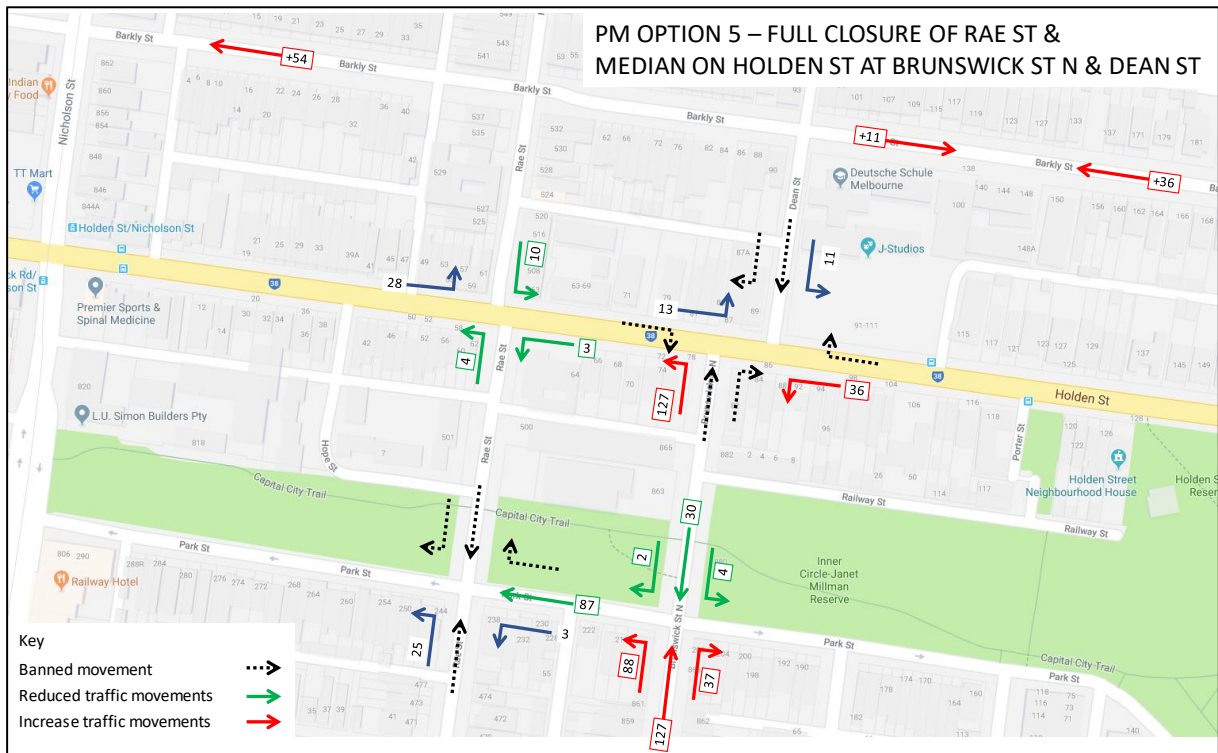


FIGURE 16: OPTION 5 – PM TRAFFIC RE-DISTRIBUTION

## COMPARISON OF TREATMENT OPTIONS

### Pros and Cons

The pros and cons of each treatment option is summarised in **Table 1** below.

TREATMENT OPTION	PROS	CONS
<b>Option 1:</b> Turn ban on Holden Street at Brunswick Street North	<ul style="list-style-type: none"> <li>Reduces peak hour traffic volumes on Rae St (north of Holden St) and Brunswick St N (south of Holden St)</li> <li>Maintains accessibility between the local areas north and south of Holden St</li> </ul>	<ul style="list-style-type: none"> <li>Increases peak hour traffic volumes on Dean St</li> <li>Increases right turn movement from Dean St to Holden St</li> <li>Does not stop the north-south/south-north rat-run</li> </ul>
<b>Option 2:</b> Median island on Holden Street at Brunswick Street North	<ul style="list-style-type: none"> <li>Reduces peak hour traffic volumes on Rae St (north of Holden St) and Brunswick St N (south of Holden St)</li> <li>Maintains accessibility from the local area north of Holden St to the local area south of Holden St</li> </ul>	<ul style="list-style-type: none"> <li>Increases peak hour volumes on Dean St and Park St</li> <li>Does not stop the south-north rat-run</li> <li>Increases right turn volumes on Dean St</li> </ul>
<b>Option 3:</b> Median island on Holden Street at Brunswick Street North and Dean Street	<ul style="list-style-type: none"> <li>Reduces peak hour traffic volumes on Rae St (north of Holden St), Brunswick St N (south of Holden St) and Dean St (north of Holden St)</li> <li>Removes all rat-run routes between the local areas north and south of Holden St</li> </ul>	<ul style="list-style-type: none"> <li>Increases peak hour volumes on Barkly St</li> <li>No vehicle accessibility between the local areas north and south of Holden St</li> </ul>
<b>Option 4:</b> Rae Street southbound closure and Brunswick Street northbound closure at Capital City Trail	<ul style="list-style-type: none"> <li>Simplifies intersections on Capital City Trail (one-way vehicular traffic only)</li> <li>Removes the rat-run route from the local area south of Holden St to the local area north of Holden St</li> </ul>	<ul style="list-style-type: none"> <li>Transfers northbound traffic on Brunswick St N to Rae St and southbound traffic on Rae St to Brunswick St N</li> <li>No vehicle accessibility from the local area south of Holden St to the local area north of Holden St</li> </ul>
<b>Option 5:</b> Rae Street closure at Capital City Trail and median island on Holden Street at Brunswick Street North and Dean Street	<ul style="list-style-type: none"> <li>Removes Rae Street intersection from Capital City Trail</li> <li>Reduces peak hour traffic volumes on Rae St (north and south of Holden St), Brunswick St N (south of Holden St) and Dean St (north of Holden St)</li> <li>Removes all rat-run routes between the local areas north and south of Holden St</li> </ul>	<ul style="list-style-type: none"> <li>Increases peak hour volumes on Barkly St</li> <li>No vehicle accessibility between the local areas north and south of Holden St</li> </ul>

TABLE 1: OPTION COMPARISON

### Impact on Brunswick Street North and Rae Street traffic volumes

The likely change in traffic volumes in Brunswick Street North and Rae Street for each treatment option is summarised in Table 2.

TREATMENT OPTION	LIKELY CHANGE IN TRAFFIC VOLUMES (APPROXIMATE)	
	BRUNSWICK STREET NORTH	RAE STREET
Option 1: Turn ban on Holden Street at Brunswick Street North	25% decrease	No change
Option 2: Median island on Holden Street at Brunswick Street North	33% decrease	No change
Option 3: Median island on Holden Street at Brunswick St North and Dean St	50% decrease	No Change
Option 4: Rae Street southbound closure and Brunswick Street northbound closure at Capital City Trail	40% decrease north of Park St Minimal change south of Park St	100% increase
Option 5: Rae Street closure at Capital City Trail and median island on Holden Street at Brunswick Street North and Dean Street	30% decrease	All through traffic removed

TABLE 2: IMPACT ON BRUNSWICK STREET NORTH TRAFFIC VOLUMES

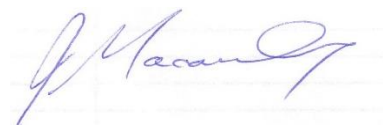
## CONCLUSION

The above analysis provides an assessment of the traffic impacts of various treatment options for Rae Street and Brunswick Street North in the vicinity of the Capital City Trail for consideration as part of the Local Area Place Making Study.

Should you have any queries, please do not hesitate to contact me on 9804-3610.

Yours sincerely

**O'BRIEN TRAFFIC**



Jemima Macaulay  
Senior Associate

**ADDITIONAL CONSULTATION:  
RAE STREET AND BRUNSWICK STREET NORTH TRAFFIC MANAGEMENT  
OPTIONS AND RESULTS OF CONSULTATION**



**Option 1 - Right turn bans in the morning and afternoon peak from Holden St into Brunswick St North**



**Option 2 - Median island on Holden St at Brunswick St North preventing right turns in and out**



**Option 3 - Median island on Holden St at Brunswick St North and Dean St preventing right turns in and out**







Email results	OPTION 1			OPTION 2			OPTION 3			OPTION 4			OPTION 5		
	Dislike	Like	Not Sure	Dislike	Like	Not Sure	Dislike	Like	Not Sure	Dislike	Like	Not Sure	Dislike	Like	Not Sure
Scotchmer LAPM Precinct (City of Yarra)	222	144	38	329	55	22	274	114	22	330	46	27	295	109	8
Moreland Cith Council (Fitzroy North only)	37	14	3	51	1	1	32	20	1	37	8	8	50	3	
North Fitzroy LAPM Precinct (City of Yarra)	25	10	9	31	7	6	22	13	9	24	18	3	23	20	2
All Other City of Yarra LAPM Precincts	27	8	5	19	9	12	14	15	11	13	12	15	7	31	3
Moreland City Council (excl. Fitzroy North)	22	6	6	18	6	9	14	12	8	12	15	7	6	26	3
Darebin City Council	30	9	6	21	15	9	20	17	8	12	25	9	7	40	1
All other councils	16	4	5	10	6	9	9	6	9	8	10	6	3	24	
<b>OVERALL</b>	<b>379</b>	<b>195</b>	<b>72</b>	<b>479</b>	<b>99</b>	<b>68</b>	<b>385</b>	<b>197</b>	<b>68</b>	<b>436</b>	<b>134</b>	<b>75</b>	<b>391</b>	<b>253</b>	<b>17</b>

TABLE I1: RESULTS OF CONSULTATION – RAE STREET AND BRUNSWICK STREET NORTH TRAFFIC MANAGEMENT OPTIONS

# APPENDIX J

## CONCEPT PLANS



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NOTES:



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SUITE 2.03, 789 TOORAK ROAD  
HAWTHORN EAST, VIC, 3123  
P: +613 9804 3610  
W: obrientraffic.com

ENGINEER: J MACAULAY	CAD FILE: 18138005.DGN
DESIGNED BY: M FERGUSON	DRAWING NO: 18138005
SCALE: 1:500	ORIGINAL: A3
DATE: 15/01/19	JOB NO: 18138
Hor. Scale Ver. Scale	SHEET NO: 1 of 13

**SCOTCHMER NORTH FITZROY**

MILLER STREET /  
RAE STREET INTERSECTION  
TREATMENT



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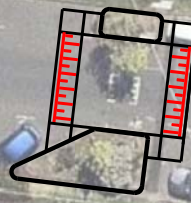
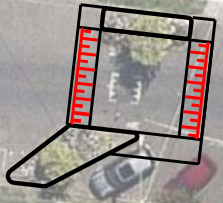
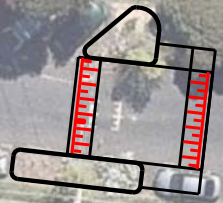
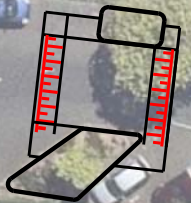
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Ver.	ISSUE:

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MILLER STREET



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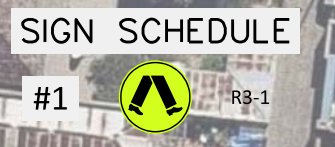
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DATE:	15/01/19	JOB NO:	18138
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HOLDEN STREET/RAE STREET  
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Hor. Scale	0 5 10	SHEET NO:	5 of 13
Ver.		ISSUE:	

**SCOTCHMER NORTH FITZROY**  
SCOTCHMER STREET  
INTERSECTION TREATMENTS



REALIGN KERB RAMPS AND MEDIAN OPENING

REID STREET

RAE STREET

SKENE PLACE

HOPETURN PLACE

SIGN SCHEDULE



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DESIGNED BY:	M FERGUSON	DRAWING NO:	18138005
SCALE:	1:500	ORIGINAL:	A3
DATE:	15/01/19	JOB NO:	18138
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		ISSUE:	

**SCOTCHMER NORTH FITZROY**  
RAE STREET/REID STREET  
INTERSECTION TREATMENT



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- #2  R2-4



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DESIGNED BY:	M FERGUSON	DRAWING NO:	18138005
SCALE:	1:500	ORIGINAL:	A3
DATE:	15/01/19	JOB NO:	18138
SHEET NO:	7 of 13	ISSUE:	

**SCOTCHMER NORTH FITZROY**

YORK STREET  
INTERSECTION TREATMENT  
AND LANE CLOSURE



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**SCOTCHMER NORTH FITZROY**  
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 INTERSECTIONS TREATMENTS



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DESIGNED BY: M FERGUSON	DRAWING NO: 18138005
SCALE: 1:500	DATE: 15/01/19
ORIGINAL: A3	JOB NO: 18138
Hor. Scale Ver. Scale	SHEET NO: 9 of 13

**SCOTCHMER NORTH FITZROY**  
NEWRY STREET  
INTERSECTION TREATMENTS



**SIGN SCHEDULE**  
 #1  R3-1

ISSUE	DATE	AMENDMENTS	BY

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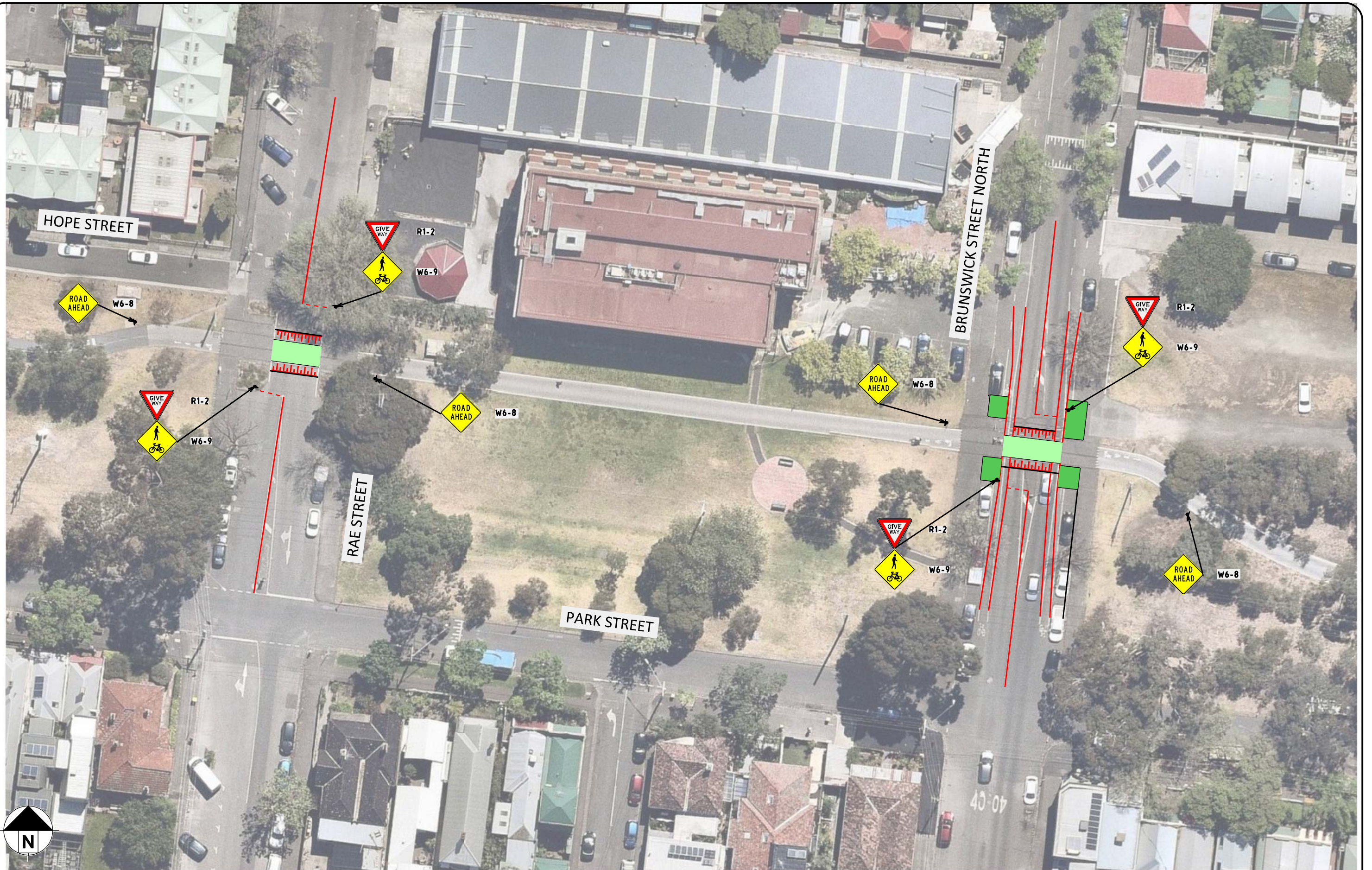
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ENGINEER: J MACAULAY	CAD FILE: 18138005.DGN
DESIGNED BY: M FERGUSON	DRAWING NO: 18138005
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ORIGINAL: A3	JOB NO: 18138
Hor. Scale Ver. 0 5 10	SHEET NO: 10 of 13

**SCOTCHMER NORTH FITZROY**  
 CHURCH STREET  
 INTERSECTION TREATMENT



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DATE: 15/01/19	JOB NO: 18138
Hor. Scale Ver. 0 5 10	SHEET NO: 11 of 13
	ISSUE: 

**SCOTCHMER NORTH FITZROY**  
CAPITAL CITY TRAIL  
RAE STREET AND  
BRUNSWICK STREET NORTH  
CROSSING TREATMENTS



R2-4

RAE STREET

ALEXANDRA PARADE

PARTIAL CLOSURE OF RAE STREET



ISSUE	DATE	AMENDMENTS	BY

**NOT FOR CONSTRUCTION**

NOTES:

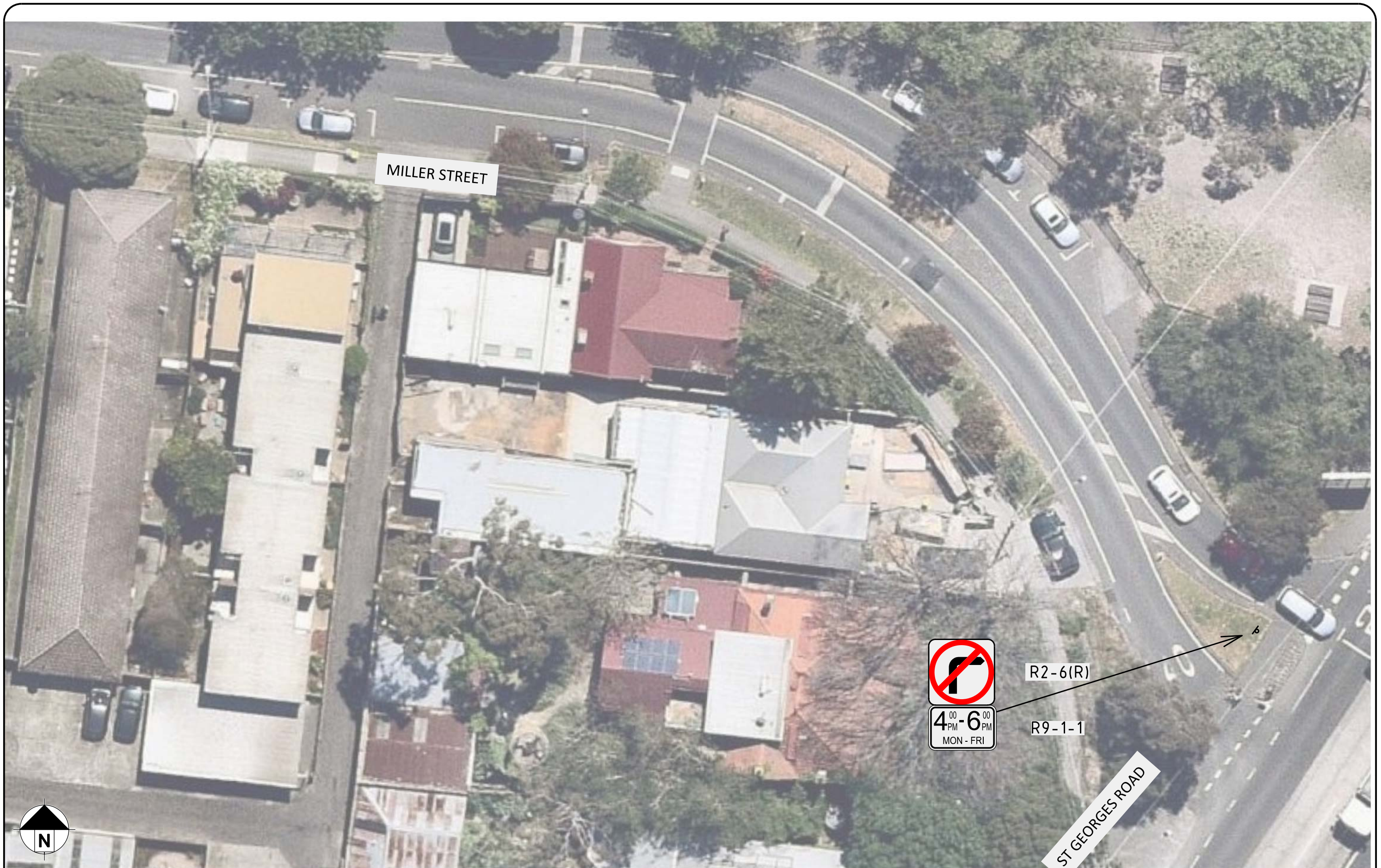


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•Traffic Engineering •Road Safety  
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W: obrientraffic.com

ENGINEER: J MACAULAY	CAD FILE: 18138005.DGN
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DATE: 15/01/19	JOB NO: 18138
Hor. Scale Ver. 0 2.5 5	SHEET NO: 12 of 13
	ISSUE: 

**SCOTCHMER NORTH FITZROY**  
PARTIAL CLOSURE  
RAE STREET AT  
ALEXANDRA PARADE





MILLER STREET

R2-6(R)

R9-1-1

ST GEORGES ROAD



ISSUE	DATE	AMENDMENTS	BY

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•Traffic Engineering •Road Safety

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W: obrientraffic.com

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Hor. Scale Ver.	0 5	SHEET NO:	13 of 13
		ISSUE:	

**SCOTCHMER NORTH FITZROY**  
MILLER STREET PROPOSED  
RIGHT TURN RESTRICTION